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ARTICLE I.

ON CHANCRE OF THE MEATUS AND URETHRA IN THE MALE.

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The anatomical and physiological objections to the location of the initial lesion of syphilis fairly within the canal of the male urethra, are obvious. While, with some individuals, the external orifice of that canal is capable of admitting the extremity of the little finger, it is in the majority of men far less capacious. Whether, however, that orifice be above or below the average size, the canal itself is plainly in all cases planned only to convey fluids in one direction, viz., from within outward. The "set" of every follicle and duct is evidently opposed to a current in the reverse direction. When in a normal state, it is traversed by the outgoing urinary stream with far greater ease than it is penetrated by the most skillfully propelled fluid intended as an injection. Every surgeon knows that a filiform bougie which refuses to enter a tight stricture approached by the face, when entered from

behind through a fistulous sinus will often slip through the coarctation, from behind forward, with perfect readiness, occasionally without the knowledge of the operator. The urethra, as Sir Henry Thompson has well shown, is not a tube, but a long closed valve, open only when distended by natural or artificial measures. That this valve should open naturally to receive infectious secretions and thus become the seat of chancre, seems in the highest degreee improbable.

This a priori improbability, founded upon the nature and office of the valve, can not be safely ignored in the study of doubtful cases. The laws by which the body is regulated in health, are really formulated by ourselves from averages of observation, and the laws established regarding disease, are in the same measure genuine and trustworthy. The exceptions may be, according to their character, rare, curious, valuable, interesting or wholly unimportant.

Now since the day when Hunter's error was replaced with a clear recognition of the distinction between syphilis and gonorrhœa, few skillful and conscientious physicians have treated a genital discharge, incurred during suspicious intercourse, without a mental query as to the possibility of the existence of a lesion of syphilis in the urethra. That vulgar dishonesty or ignorance, which, confusing the symptoms of the two disorders, serves only to alarm the patient affected with clap by picturing to him its remote injurious influences upon the system at large, need not be here considered. In how many instances has the really conscientious practitioner, carefully inspecting the purulent discharge from the urethral orifice, and the small portion of the membrane of the canal which can be exposed by a separation of the labia, hesitated before answering the inevitable question of the patient, "Doctor, has this any connection with syphilis?"

The interest attaching to this subject seems to me to belong chiefly to those primary lesions of syphilis, which lie entirely within the urethral orifice, and which are therefore either invisible without the aid of endoscopy, or recognized with difficulty and imperfectly by the unaided eye. Under the title, "urethral chancre," or, "chancre of the urethra," several writers have included, not merely the lesions just mentioned, but those also

located upon or near the urethral orifice, involving in whole or part, the rim of the canal, characterized by induration, discharge, and, occasionally by orificial stenosis after cicatrization. But in this last-mentioned class of cases, the syphilitic sore is evident, easily recognized by the naked eye, and accompanied by symptoms which only great inexperience or gross carelessness could attribute to a blennorrhagic affection.

From this failure to distinguish between the two varieties as to location described above, has arisen a misapprehension regarding the frequency of occurrence of the lesion. "Chancres of the urethra," say Bumstead and Taylor in their recently published treatise,* "are more frequent than is commonly supposed, and much more common than the chancroid in this locality." This statement is accurate in the sense in which the term, "chancres of the urethra" is employed by our authors, for they include under the designation, chancres of the meatus. In any other sense, the statement is far from being true. Of those lesions which are strictly intra-urethral, either invisible or but very imperfectly visible to the eye unaided by the endoscope, it can be properly said that they are of much less frequent occurence than is commonly supposed. These are they which awaken the anxiety of the physician and the alarm of the patient, in many cases where the diagnosis of gonorrhœa is attended with some doubt. I shall attempt to relieve the one and the other in the pages which follow.

During the last eighteen years, I have had the opportunity of observing, both in private and hospital practice, several thousand cases of primary syphilis, and of the entire number but two have been recognized as unquestioned instances of an initial sclerosis situated entirely within the urethral canal. In his valuable and compendious handbook of venereal disease,† my friend, Dr. Keyes, states that only two similar cases have been observed by him, one of these through the endoscope.

Mr. Henry Lee remarks that "an indurated sore very rarely exists within the urethra although the syphilitic poison must be often conveyed there. On the lips of the urethra it not

* The Pathology and Treatment of Venereal Diseases, Phila. 1879, p. 471.
† New York, 1880, p. 89.

unfrequently occurs, but in the whole course of my experience I have never known it to originate further back than a quarter of an inch from the orifice: and in the great majority of cases, if it affects the urethra at all, it spreads to it from without." (Lectures on Syphilis, etc., Phil., 1875, p. 63.) A brief record of the essential features in my cases is given below.

Case 1. B—, a florid gentleman, 50 years of age, and well nourished, supporting both wife and mistress, had consulted me frequently for progenital herpes. On the 15th of Aug. 1879, five days after intercourse with his mistress, he presented himself with a circlet of herpetic vesicles surmounting the corona glandis, having the appearances noted in his previous attacks. They disappeared as usual after the part was properly protected and washed for a few days with an astringent and sedative lotion. On the first of the next month, he returned for examination, and at this time his vesicles were all healed. But I found an indurated gland in the right groin, and a pleiad similarly involved on the other side. There was no induration of any portion of the mucous membrane lining the preputial sac, and it presented a normal appearance, as did also the membrane of the canal which was visible when the meatus urinarius was exposed by separating the labia. There was, however, a slight, very slight, discharge of mucoid matter from this orifice, and a mild degree of subjective discomfort.

On seizing the glans vertically between the thumb and the finger, and pressing gently upon it, from before backward while the organ was in the pendulous position, the sensation produced was suggestive of a short section of the stem of a common clay pipe set in the substance of the glans where it is tunneled by the urethra. This was evidently produced by a dense, resilient, well localized neoplasm, recognizable with perfect ease by the touch alone, and neither by the discharge which it occasioned nor by other concomitant symptoms, liable to be confounded with a gonorrhœal affection.

Endoscopic examination, made in the manner described below, revealed the mucous lining of the fossa navicularis in a thickened, and infiltrated condition, while a light-greyish-hued, secreting, linear abrasion, at the depth of one and one-half centimeters,

(¾ inch), itself about five millimeters in length (¼ inch), and parallel to the axis of the canal, could be recognized with great distinctness in the right wall. When its secretion was carefully wiped away, the latter was seen to proceed from a superficial loss of substance on the right side of the canal, having the dimensions given above. It was clear that the induration lay beneath this erosion and that the latter was in intimate connection with it, extending beyond its borders in every direction. The color of the urethral membrane in no way suggested the intense redness of acute blennorraghia. On pressure there was evoked a very slight tenderness. In short the pronounced symptoms of the case were the induration, which was very clear to the touch without the aid of endoscopy, and the coincident adenopathy. Only the grossest carelessness could have served to misinterpret the meaning of these significant features.

The abrasion having been dressed with powdered iodoform applied on a wisp of cotton with a small probe, the indurated mass did not fail to disappear gradually, the patient meantime being brought under the influence of small doses of the protiodide of mercury. Within five weeks a typical macular syphiloderm appeared over the skin of the belly and chest, very slightly evident upon the face. This yielded promptly to fumigations with the vapor of calomel and cinnabar; and the subsequent history of the patient has been the common one, of crops of mucous patches appearing at intervals on the mucous membrane of the mouth and especially of the tongue, the latter influenced doubtless by the habits of the patient as regards tobacco.

Soon after the diagnosis in this case was established, I had the opportunity of "confrontation" with the mistress from whom the disease has been presumably acquired. She admitted to me, in private, unfaithfulness to her lover, and exhibited normal external genitalia. But pressure extruded a sanguineous and purulent discharge from the contracted os of a virgin uterus, which probably issued from a secondary lesion situated on the wall of the neck, as she had also post-cervical adenopathy, faucial hyperæmia with sequelæ of old ulceration, and two typical gummata over the left olecranon. She stated that the coitus, suspected to have been the occasion of the trouble, had been

accomplished with considerable violence; that she had not been feeling well for two weeks prior to that date; and that the act had been followed by a slight bloody discharge from the vagina which both parties had noticed. Beneath the rouge of her artificially reddened cheeks, a distinct pallor existed. Her case was one of those not rarely seen in women, where the symptoms of the disease pass unnoticed for a variable period, and are excited to activity by various depressing causes. She was placed upon specific treatment and her symptoms were succeeded by those of fair health in the course of two months. The relation between the parties was ended by the discovery of the facts.

CASE II. G., æt. twenty-four, a thin, nervous and cachectic looking youth, came to me in February, 1880, by the advice of a colleague, for the relief of his symptoms. He had been leading a dissolute life, indulging with many women, and could give no details as to the length of time during which he had suffered from venereal disease, except that he thought it was "several weeks." On examination his skin was seen to be quite generally covered with a classical macular syphiloderm; there was post-cervical, and inguinal adenopathy, pustules of the hairy scalp, mucous patches of the mouth and lips, and moderate alopecia. When I examined for the seat of the primary lesion, I was surprised to find that the entire mucous surface of the glans was desquamating, though apart from the rolling off in minute flakes of the outer layer of epithelium, there was no evident lesion, nor trace of any such having previously existed. As soon, however, as the glans was seized with the thumb and fingers, in the manner described above, it became clear that a large mass of dense induration lay deeply imbedded within its substance. The dry, thickened and toughened feel of the entire extremity of the organ was peculiar, and its appearance suggested at first sight, the diphtheroid features which certain primary lesions of this part occasionally exhibit. The real character of the sclerosis was, however, easily determined when examined with a little care. The induration suggested the feeling of a No. 17 F. sound inserted in the urethra to the extent of a few centimeters and the consequent thickening was such that the lips of the urethra were stiffened by reason of loss of their natural elasticity, and were

penetrated with some little difficulty by the tube of the endoscope. This once inserted, there became visible a peculiar bloodless, whitish, cicatriform condition of the lining membrane, possibly brought about in part by the pressure upon the infiltrated walls by the encircled tube. It was evident that, in this case also, the neoplasm was submucous. At one point in the roof, about two centimeters (three-fourths of an inch) from the urinary orifice, was a large-pin-head-sized, slightly elevated granulation, of much lighter color than the similar granulations commonly seen upon the free mucous surfaces of the external genitals. In this case, the discharge was so slight as to scarcely awaken the apprehension of the patient, who, it may be said, however, was one of those who exhibit a not unusual indifference to the diseased state of the external generative organs.

Here was clearly an instance of the so-called "transformation of chancre in situ," occurring in the urethra, the primary lesion having been transformed into one of the secondary stage, co-existing thus with the outbreak of a cutaneous exanthem and other manifestations of systemic trouble. The occurrence of the singular desquamation upon the glans, was explainable by supposing that a degree of inflammation had complicated the sclerosis, and that the extension of this latter to the covering of the glans had brought about the destruction of its most external epithelial layer.

The local and constitutional symptoms in this case yielded gradually though somewhat slowly to appropriate treatment, begun by the fumigations described above, and continued by the administration of the biniodide of mercury by the stomach. The only local treatment necessary was an inunction of the surface of the glans with carbolized oil, after washing with soap and water, and one or two pencilings of the vegetating urethral surface with a twenty per cent. solution of nitrate of silver. All three patients named above are still undergoing a gentle mercurial course, and all are free from symptoms of active manifestation of the diathesis with the single exception of the male patient in case No. 1, who is still annoyed at times by the occurrence of patches on the dorsum of the tongue.

It may be well to remark in passing, though the matter is not

strictly germane to the subject under consideration, that upon repeated and apparently trivial attacks of preputial herpes, a guarded prognosis should always be pronounced in the case of individuals who admit that they have indulged in illegitimate sexual relations. Every one knows that an attack of herpes, pure and simple, is never followed by syphilis, but many are apt to forget that an herpetic lesion of the prepuce or glans, is an admirable portal for the infecting virus of both forms of contagious venereal sore. Men subject to this annoyance, leading irregular lives, are many times lulled into a false sense of security by discovering upon their persons a familiar local disorder, which up to date, has always proved benign in character, but which, after inoculation, or even when the vesicle is merely an expression of protest at the point where syphilitic inoculation has already occurred but not yet declared itself, does not fail afterward to exhibit a characteristic induration, and to be followed by the general symptoms of lues.

For the endoscopic examination of the pendulous portion of the male urethra, a simpler apparatus than the endoscope of Désormeaux has been used by me with advantage. It consists merely of the ordinary straight endoscopic tube, with a Miot lamp, by which illumination is secured. At times, it is well to directly examine the lining membrane through the aperture of an ophthalmoscopic mirror, the light being reflected from the Miot lamp or from a gas jet at the level of the eye, the patient being in the erect position before the operator. When for any reason, it is desirable to make examinations in the recumbent position, the Miot lamp can be held at any angle, and the rays directed so as to fall into the tube by the side of the head of him who inspects the canal.

An important point to note, in the examination of the canal of patients who are affected with chronic or subacute urethral discharges, is the frequent discovery upon the floor of the fossa, of something which looks at first sight, very like an ulcer. The surgeon who has not had experience in this matter, is exceedingly apt to mistake for an ulcer, syphilitic or simple, the appearance presented at this point. It is due merely to the fact that the eye is habituated to representations of the urethra after vertical sec-

tion, and the post-mortem view of the floor of the canal, when the urethra is laid flat upon a plane surface, gives no clue to the tinted picture presented during life. In the large number of men who have even a slight urethral weeping, there seems to be a tendency of the secretion to accumulate in the little pocket on the floor of the fossa, which becomes visible when the endoscope is introduced at this point. Here a linear, slightly reddened, or yellowish longitudinal furrow is evident, covered with a more or less opaline scanty mucus, which can be removed by a very simple manipulation, when the supposititious "ulcer" is at once seen to be the normal reddish sulcus which, even in entirely healthy individuals, exhibits a color somewhat heightened above that of the urethral walls. The following case illustrates the point to which reference is here made:

CASE III. Dr. W., aet. forty-two, married, narrow-chested and poorly-nourished, with a history of incipient tuberculosis, contracted a urethral discharge in Paris, after coitus with a suspicious party. The discharge appeared within six days after exposure, and, being then in London, the patient consulted a British practitioner of repute, who pronounced the case one of simple gonorrhœa, and prescribed accordingly. Dr. W. then returned by transatlantic steamer to this country, and while on his homeward voyage, his clap improved perceptibly. Some slight gleety discharge however remaining, he consulted a professional gentleman of acknowledged skill in the city of New York, who at once proceeded to make an endoscopic examination of the urethra. The physician-patient was a man of intelligence, and was proportionately shocked to learn, from the lips of his colleague, that he was affected with a urethral chancre. The operator with the tube was not only so confident of the existence of this primary lesion of syphilis, but so charmed by its exceptionally pronounced features, that he expressed regret because he had not an arrangement of mirrors by which the patient might, auto-endoscopically, inspect for himself the evidences of his dreaded disease. This practitioner was as confident as he was conscientious in his convictions, and at once placed the patient upon a mercurial course, medicating the urethral lesion with

iodoform in powder, and on wax bougies made expressly for the purpose.

In the course of two weeks, the patient came to this city and consulted me, giving a full history of his case, and exhibiting in his general facies and condition, the evidences of the mental trouble which his supposed disorder had occasioned, as well as the effect upon his tuberculous diathesis of the mercurial course to which he had been subjected.

I discovered upon examination, that he had all the symptoms of a simple gleet, without stricture, and on introducing the endoscopic tube, could discover absolutely no lesion nor induration save the little pseudo-ulcer, which can always be detected in similar cases, upon the floor of the fossa, as has been pointed out above. In no respect did this differ from the same furrow-like chink, as seen in a dozen patients examined immediately before. At this date too, there was no adenopathy of any part of the body, and the catarrhal symptoms from which the doctor suffered, were those to which he had been long accustomed before his recent escapade. With considerable hesitation, he consented to accept my verdict in his case, a verdict to which he has since acceded with very great heartiness, as his gleet completely disappeared under appropriate treatment, and his general health manifestly improved soon after his mercurial medication was discontinued. Four months have since passed, and he has yet to exhibit the first symptom of syphilis.

Every physician knows that the muco-cutaneous tissues at the orifices of the outlets of the body are more sensitive to the action of external irritants than those which are situated either more deeply or externally. Thus, the nitrate of silver will produce more disagreeable effects upon the angles of the mouth, when applied there, than either upon the buccal membrane or the skin of the lip. This sensitiveness is clearly to be recognized in the case of visible sores of the meatus of the urethra. They are readily irritated by the urine, a fact which does not seem to be at all significant of deeper urethral lesions, and this irritability is apt to result in phagedena, a complication which is well known to be more common in the case of the chancroid than in primary syphilitic lesions. The resulting loss of tissue, occurring as it

does at the apex of the cone of the glans penis, produces a striking and permanent deformity, giving the body a peculiar square-shaped appearance, and often interfering with the smoothness of the urinary jet, as it is projected from the body in the act of micturition. I append a brief record of two of many cases of chancre of the meatus observed by myself, in illustration of the facts set forth above:

Case IV.—S., a Jewish youth, 19 years of age, and circumcised duly in the ritual of his race, consulted me in March of 1877, with a small-penny-sized, ragged looking ulcer, on the right half of the meatus, involving equally the urethral and penile surfaces. It was irregularly oval in shape, its base indurated, its floor covered with a pultaceous slough, whose removal showed beneath a granular and livid surface. It was exquisitely sensitive, aggravated by each discharge of urine, and was evidently serpiginous in the direction of the right lateral surface of the glans. It had existed for more than two weeks, and had been first observed about one month before examination, after exposure with a woman of the town. The inguinal glands of both sides were indurated and one on the right was quite tender. The young man had an exceedingly cachectic look, and was put upon steel internally, and a lotion containing the potassio-tartrate of iron locally, after which the sore went on to cicatrization, leaving a decidedly blunt glans, which looked as thought a thin slice of tissue had been removed from the extremity, at an angle of about thirty-five degrees from the axis of the cone on the right. General syphilis declared itself later, and was of a mild grade.

Case V.—B., a newly-married artizan, fairly well-nourished, 25 years of age, was brought to me for consultation by a professional colleague. About twelve days after coitus with a suspicious party, he had a sore develop on the glans at the urethral orifice, which became quite painful and soon spread in extent. It had existed for some weeks prior to the date of examination. I established the fact of a conical, crateriform ulcer, involving the entire rim of the meatus, but penetrating more deeply on the inferior surface. The base of the cone was nearly circular and at the plane of the meatus, its apex buried in the urethra to the depth of twelve millimeters (one-half inch). It was densely in-

durated and its floor covered with reddish granulations. Tenderness was quite marked, and he complained of pain on micturition. The inguinal glands were enlarged as also those of the crural region, and moderately indurated. There was little discharge from the urethra or from the surface of the sore. The patient had been careful to separate from his wife, in order to spare her the risk of infection. He was put upon small doses of the protiodide of mercury and his sore penciled with a nitrate of silver solution containing ten grains to the ounce. Under this treatment the irritability diminished and cicatrization occurred, with the glans looking as though it had lost a small anterior section transverse to the axis, presenting thus a squarish shape. The urinary orifice was completely destroyed, and admitted a No. 30 F. metallic sound with ease, although his physician had before entered only a No. 18 F. during an exploratory examination for suspected stricture at a previous date. The patient complained, when questioned on the subject, of the irregular distribution of his stream in the act of micturition, as he frequently soiled his clothing at these times. His physician informed me, subsequent to the date of my observation, when cicatrization had been accomplished, that general syphilis followed.

The points of interest worthy of special note in these last cases, are, first, that in both instances the sores were syphilitic. It is scarcely necessary to remark that extensive destruction of tissue is not uncommon after soft chancre. I have seen three-fourths of the entire organ, inclusive of the urethra, disappear after gangrene had occurred in a case of chancroid of the frenum. Second, I remark, in passing, that circumcision, while it is deservedly supposed to diminish the chances of venereal infection, does not furnish complete immunity. The experience of those who see many patients affected with venereal disease, always includes a certain proportion of individuals of the Israelitish race. I have had under observation, during the current month, four Jewish patients, one treated for abscess of the prostate, the result of acute prostatitis complicating gonorrhœa, one for secondary, and the others for ancient syphilis. Third, the error should not be committed of prognosticating grave syphilis from gravity of the initial lesion, or its complications. It seems to be at present

accepted as true, that there is no relation between either the extent of induration, the length of the period of incubation, the occurrence of phagedena, or other concomitants of primary syphilis, and the subsequent systemic phenomena. This fact, opposed as it may appear to what would be anticipated by a knowledge of pathology in general, rests upon the best of clinical evidence; and while it is perfectly true that grave syphilis may follow a severe initial sclerosis, it is equally true that in other cases there is no such sequence, and a man with a severe serpiginous primary sore may afterward exhibit symptoms of the most benign form of the disease.

Of a total of 1773 lesions of primary syphilis, collected by Jullien in his recently published and voluminous treatise on the venereal diseases,* but 17 were strictly intra-urethral in location, while 89 involved the meatus. The author remarks that this initial sclerosis is almost never encountered deeper than the anterior half or third of the penile region, and that when the meatus is involved, the sore, incessantly irritated by the urinary current, presents the irregular appearance of the simple chancre. Respecting the best manner in which it may be recognized when seated more deeply, his remarks are seen to be justified by the clinical facts I have given above: "In order to best discover the induration, the urethral orifice must be seized between the thumb and finger through its vertical diameter. Compressed transversely, the tissues offer a resistance which permits but an exceedingly imperfect appreciation of the special sensation imparted by the syphiloma. The plastic infiltration may be tardy of occurrence, as in the case of a patient of Gailleton, whose chancre displayed induration on the thirtieth day of ulceration, and at a time when it was ready to cicatrize. At this moment the sclerosis developed to such a degree that the extremity of the canal seemed to be made of wood and micturition was, during several days, rendered difficult by a real fibrinous retraction."

He proceeds further to point out the painful character of the sore of the meatus, when irritated by the urine, and its tendency to phagedena, with the characteristic alteration in the configura-

* Traité Pratique de Maladies Vénériennes, Paris, 1879, p. 581.

tion of the glans, which follows the last named accident. Speaking of both forms, he states that the secretion to which they give rise, is "of too little importance to attract attention," and relies for diagnostic ends upon the presence of a little nodose mass more or less sensible to the touch and painful on micturition, together with the accompanying inguinal adenopathy.

It is manifestly improper to draw conclusions from a limited number of cases, but when this limited number is a series of rare exceptions to rules established in the experience of a generation of men, the inferences they suggest should possess some interest. I think it may be fairly concluded that:

1. Chancres of the meatus and of the urethra are symptomatically distinct.

2. Chancres of the meatus are chiefly remarkable for their irritability, in consequence of the passage over them of the urinary current, their tendency to phagedena, and the characteristic deformity of the glans which they frequently occasion.

3. Intra-urethral chancre, as distinguished from visible chancre of the meatus and chancre involving in part only the rim of the urethral valve, is of exceedingly rare occurrence.

4. Intra-urethral chancre, invisible or but imperfectly visible to the eye unaided by the endoscope, can usually be distinguished as such in consequence of the mass of induration which lies immediately beneath the urethral mucous membrane at the site of the lesion, and is readily recognized by the touch through the external tissues of the male organ.

5. Intra-urethral chancres are accompanied by very scanty or insignificant discharge, and when the latter is present, it bears no proportion to the evident signs of disease connected with the sclerosis.

6. The reddened furrow or sulcus, covered with a thin secretion, visible in the floor of the fossa navicularis, especially in the subjects of gleet, should never be mistaken for intra-urethral chancre.

7. When a man exhibits a decidedly purulent urethral discharge, without coincident symptoms of unmistakable syphilis, he can be safely pronounced free from all danger of the last named disease, provided always the period of incubation of syphilitic chancre has, in his history, already lapsed.

8. Intra-urethral chancre need therefore never be mistaken for gonorrhœal disease, as the two affections are so distinct that a differential diagnosis can usually be satisfactorily established without the aid of the endoscope.

9. For many reasons the endoscope should be regarded as a valuable adjuvant in the diagnosis of urethral disorders, and recourse should be had to it in all doubtful cases.

For the benefit of those who are specially interested in the subject under consideration, I append a list of a few illustrations in color, of the urethral lesions described:

From "Die Syphilis der Haut und der Angrenzenden Schleimhäute;" M. Kaposi; Wien, 1873. I Lieferung, Tafel I, 3. Soft Sore of the Meatus: T. V., 2 and 3. Chancres of the Meatus in Jewish Children, Infected in the Rite of Circumcision.

Also from the reproduction of Ricord's "Illustations of Venereal Disease," Philadelphia, 1872.

Plate VI., Fig. 3. Grayish-yellow secretion covering symmetrical urethral ulcers.

Plate IX., Figs. 1 and 3. Extensive ulceration of membranous and prostatic portion of the urethra, involving also the neck of the bladder, said to be instances of primary syphilis, but more probably later manifestations.

Plate XI., 1. Chancre of meatus.

2. Small grayish-hued ulcer in the superior commissure of the meatus, visible after separtion of the labia.

ARTICLE II.

ON THE MANAGEMENT OF THE UTERUS AFTER PARTURITION.

By JAMES H. ETHERIDGE, A.M., M.D., Professor of Therapeutics and Medical Jurisprudence, Rush Medical College, Chicago. Read before the Chicago Gynæcological Society, May 21, 1880.

I desire to call attention to a subject that every practitioner is interested in, and one which the general profession should use its powerful influence in revolutionizing the treatment of. That subject is, The Management of the Uterus After Labor. After

devoting much time to considering this topic, especially in dispensary practice where one can see continually the lack of skillful care of the womb after lying-in, I have reached the solemn conviction that every woman, after delivery, should be under a physician's care for at least two months. Nearly all lying-in patients are discharged at the end of twenty or thirty days. Very many are not seen by the obstetrician after delivery. The general custom of remaining in bed for a space of seven or ten days after delivery is observed as a rule, and after that time the patient is allowed to go about and to do what she ought not to do. The largest proportion of child-bearing women are poor and must labor. Household duties are resumed too early after delivery. Going up and down stairs, taking long walks, running sewing machines, even doing the usual week's washing and ironing, and very many other kinds of labor are performed by the recently delivered woman. The great strain thus put upon the female system after nine months of a most ceaselessly active and consuming tax upon her physical resources to maintain her own physiological balance, and at the same time to build up a distinct and separate human being within her, is a test of human physiological powers so unreasonable and so prodigious that it constitutes a veritable outrage. Very many women endure this test and apparently are never worse by it, thanks to a wonderful recuperative power which their systems possess. A woman of feeble physique sees other women recover quickly from parturition and attempts to do as her stronger sister has done, and the result is the inaugurating a train of pathological processes within her pelvis from whose effects she promises never to be wholly freed. When too late, her mistake is discovered, and she soon becomes a chronic invalid. Such a patient ought to be under the obstetrician's care at least two months after delivery.

Patients standing in need of this two months of the obstetrician's care are much more numerous than is generally supposed. Low down in the social scale we find the least number of women permanently crippled by their pregnancies and labors. In the middle walks of life very many more, relatively, are found, and in the upper classes of society it is almost the rule to find nearly all

women who have been pregnant the victims, to some extent, of some disease of the pelvic viscera. It is an exceedingly common thing to find patients among the last class who have been pregnant once or twice early in married live, and have lived barren for many years thereafter. It is as rare to find women in this class who have borne several children, as it is common to find multiparæ among the poorest classes.

The number of women constituting the so-called gynæcological cases treated to-day by physicians, who trace the commencement of their disorders back to some pregnancy, eventuating either in miscarriage or labor, is something surprising. To ascertain with some degree of satisfaction what proportion of these cases arise from miscarriages or deliveries, I have collected and tabulated the last 100 consecutive gynæcological cases, whose histories I have carefully preserved, in dispensary work. The question is always asked of those patients "What is the cause of your trouble?" All of these cases are enumerated below, and are classed under four heads. These cases are selected only to the extent of excluding virgins and women suffering from malignant and venereal diseases. I have found that the causes and diagnoses of these 100 cases can best be shown by arranging them in two columns, thus:

	CAUSES.		DIAGNOSES.	
100 Gynæcological Cases.	Confinements,	50	Hypertrophy,	34
	Miscarriages,	28	Uterine Catarrh,	53
	Hard work,	5	Lacerated Cervix,	9
	Unknown,	17	Prolapsus,	2
		100	Metrorrhagia,	1
			Retroflexion,	1
				100

From this number it will be observed that 78 cases out of the 100 attribute their troubles to a certain confinement or miscarriage. In other words, 78 per cent. of gynæcological cases may be said to have originated immediately subsequent to gestation, partial or complete.

This brings me to a brief consideration of the management of women after labor. Given, a recently delivered woman, what is the physician's duty toward her? I am convinced more and more every year, from the lesson given by the interpretation of the foregoing briefly condensed syllabus, that the convictions of

obstetricians will result in a new teaching, that a physician's duty to mothers will not be completed after delivery till the uterus has resumed its normal size. The time is near at hand when this treatment, preventive of gynæcologic developments, will take rank with sanitary science, the most actively investigated field of medical science to-day.

Immediately after delivery the uterus presents a state of physiological activity equaled only by the process instituted in the same organ immediately after conception. "In no other structure do we ever see nutrition and growth going on so rapidly as here, where out of a mere mass of nucleated fibers and cells, an enormous body of numerous and well marked muscular fibers becomes developed within the course of the nine months of pregnancy.*" After the completion of placental expulsion, the muscular fibers, exhausted by their prodigious action during labor and so rendered prone to degenerate, and deprived also in a great measure of the supply of blood brought to them so profusely during gestation, undergo a fatty metamorphosis and almost all melt down and disappear. In normal cases the whole organ dwindles down and diminishes to nearly its original dimensions in from six to eight weeek. The muscular fibers are not absorbed as muscle, but, after first undergoing fatty degeneration, are absorbed as fat. This degeneration progresses from the inner to the outer layers. And right here, in this physiological process of degeneration and absorption, are presented the beginnings of so many cases of uterine disorder. Interference with this process develops disease. What constitutes this interference and how can the obstetrician avert it? These two questions as to cause and cure are what I wish to call special attention to. Clearly defining the first will suggest answers to the second question.

1. As to the cause.

It may be laid down as a broad principle that whatever lowers the health standard for a woman recently delivered, will retard or pervert the normal degenerative and absorptive processes herein considered. It is, of course, unnecessary to state that what may be called the health standard of such a woman is not the

* Simpson, Dis. of Women, p. 587. 1872.

same as the health standard of a woman who has not so recently passed through with the immense strain and drain on her vital powers of building up, out of her own tissues and vitality, a new human being. Each one may be called a healthy woman in her way and yet both are very far apart in very many particulars.

(*a*) Faulty nutrition lies at the basis of nearly or quite all cases of arrested uterine metamorphosis and absorption. Whatever contributes to this faulty nutrition is of the first importance. Lessened oxidation of the blood from diminished respiratory capacity in the last months of gestation, enfeebled circulation from the alleged fatty degeneration of the heart, incident to all pregnancies, perverted or exaggerated nervous manifestation attending ingravidation, all contribute to lessen the digestive and assimilative functions in all women. The feebler the woman, ab initio, the more pronounced these contributions to faulty nutrition after delivery become, varying all the way from the minimum effect to the occasionally observed irretrievable impairment of health. The more that the obstetrician reflects upon these factors of faulty nutrition in detail and as a combination, the more he is astonished that more has not been written upon them, and the more he is surprised at the varying resistive capacities that women present at this time.

(*b*.) Another and but very little mentioned cause of faulty nutrition is diathesis. Patients presenting strongly marked rheumatic, strumous or gouty diatheses are extremely liable to become victims of a faulty nutrition, inducing arrest of fatty degeneration and absorption after delivery. Were time allowed, many cases illustrating the influence of diathesis in its deleterious effect upon women after labor could be cited. From the hundreds of recorded dispensary cases at my disposal, I could present multitudes of cases illustrative of the rheumatic and gouty diatheses in retarding involution. The confidence with which I can speak upon this point is founded upon the results obtained from using so-called anti-rheumatic and anti-lithic remedies in treating and curing such patients.

(*c*.) Another factor of faulty nutrition is anæmia. This condition is so frequently produced by too abundant losses of blood seen in obstetric practice, that merely mentioning it suffices to

call to the mind of every gynæcologist numerous cases of involution arrested thereby. I know of no condition more common in gynæcological practice than the enlarged uterus in women suffering from anæmia dating from confinement.

(*d.*) Another condition contributing to faulty nutrition which ought to be dignified by special mention, although it is in fact a mere symptom, included in some of the aforementioned systemic conditions, and of extremely frequent occurrence, is obstinate constipation. The multiform evils arising from this trouble are as familiar to physicians as household words. Yet there is no one thing more commonly overlooked and neglected by practitioners.

(*e.*) Another cause of faulty nutrition is laceration of the cervix uteri. This accident, resulting in cicatricial tissue, uterine displacement and obstructed circulation, speedily induces reflex, deleterious effects on the general nervous organism, which eventuate in a faulty nutrition of the system, and to this can we attribute the continuance of the enlargement of the uterus.

(*f.*) Another condition producing faulty nutrition is faulty hygiene, which includes, chiefly, bad air, improper food, and insufficient protection against atmospheric changes.

(*g.*) Another condition conducing to faulty nutrition is the great activity of the depressing emotions. Great grief, fear, excessive anxiety, an excessively humiliated pride and the like, produce such wrecking devastation upon the system as to result in mal-nutrition.

(*h.*) Another cause of arrested involution is occasionally met with, which obstetricians should emphatically denounce, and that is the too early resumption of the sexual act.

(*i.*) Another cause of faulty nutrition, resulting in permanent uterine enlargement is that peculiar systemic condition characterized by a general depravity of all the powers of life, called neurasthenia. The more closely this term, as applied to the condition that it defines, is investigated, the more does it seem to be a *pons asinorum*. Occasionally the obstetrician, bewildered for an explanation, is justified in taking refuge behind this term to explain the cause of sub-involution.

What is the obstetrician's duty to the recently delivered woman?

Evidently, to treat her till the uterus has resumed its normal size. To do this involves anything but routine treatment. Each case needs treatment indicated by itself. Any physician attempting to treat all cases alike will soon abandon such treatment and make each case an individual study. For the sake of convenience, the treatment can be divided into two heads; first, general, and second, local.

First. The general treatment reduces the specialist to the rank of the general practitioner, and involves taking into consideration every factor of health and disease. Above all, the patient must be put into possession of a digestive power as perfect as can be secured. The stomach and intestines must be made to do their individual work as vigorously as the conditions found will admit. Stomachic dyspepsia, tympanitis, costiveness, and constipation must be reduced to a minimum. The obstetrician's armamentarium against these symptoms is very great. Particularizing individual remedies would carry this paper to the proportions of a volume. It must suffice to say that every alimentary symptom must be carefully scrutinized and corrected.

General treatment also involves attention to the cutaneous and urinary functions.

Of infinite value to the obstetrician is a knowledge, well digested and made practical, of diathetic taints. These modifying conditions are so overshadowing in their influence upon the functions that nothing short of a speedy and intelligent recognition of them will make the practitioner's prescriptions, in most instances, aught but lucky ventures in correcting them.

Anæmia should be treated with ferruginous and bitter tonics. Produced, accompanied or modified by rheumatic, gouty or strumous diathesis, it demands remedies specially calculated to lessen such diathetic taint, before so-called anti-anæmic remedies can be of signal advantage. Losing sight of this fact often results in defeat, easily avertable.

Neurasthenia must be treated in a way *sui generis*. Massage, aggressive tonics, the best of physical and mental hygienic conditions, food the most nutritious and in the largest quantities possible for the patient to digest and assimulate, and occasionally,

electricity, seem to constitute the most approved treatment of to-day.

Second. The special treatment of women after confinement, where needed, consists chiefly in the use of means directed to the uterus itself and its accompanying organs. Each case furnishes its own indications.

Where lacerations of cervix or perineum exist they must be closed.

When the uterus is found too low down from its preternatural weight, it should be sustained by some perfectly fitting mechanical support. Any degree of prolapsus produces disordered uterine circulation, eventuating in engoregement, which, in turn, by encroaching upon the lymphatics, prevents the performance of their special functions.

When no cervical laceration exists and the uterine circulation is not interfered with by prolapsus from any cause whatever, a few measures of great efficacy may be used to hasten involution. The first one of these is ergot. The fluid extract ought to be frequently administered, in comparatively small doses—e.g. 10 to 15 drops, four or five times per day. When any contra-indication exists against its use by the stomach, nausea, vomiting, cephalalgia, or any diminution of the lacteal secretion, or untoward effect upon the babe or wakefulness or intestinal colic, it can be given by the rectum twice a day, in milk, in doses proportionally increased, or in suppositories containing ergotine.

The second measure available is hot-water injections. These, given per vaginam, as hot as can be borne, twice or thrice daily, in amounts varying from one to two gallons, are of extremely great efficacy in promoting involution. Very often they cannot be given so often in so large amounts. The patient is unable to administer them without imposing an unwarrantable amount of fatigue upon herself. When she cannot receive the benefit of them used to their greatest advantage per vaginam, very often a maximum of good can be derived by putting a quart of hot water into the rectum, a method recently advocated by Dr. Chadwick. Twice daily a rectum filled with hot water will produce signal benefit. The fact must not be lost sight of, however, that simple hot water *may* produce disturbance in the rectum by

denuding the mucous membrane of its protective mucus and thereby setting up the commencement of a prochitis.

The explanation of the *modus medendi* of hot water is its well and long-known powerful stimulant effect upon the vaso-motor constrictor system of nerves, producing a diminution of the caliber of blood vessels. In this way decongestion is quickly obtained and is comparatively easily secured.

Another measure of inciting the resumption of the act of involution in cases called chronic, is the use of tents for repeated distension of the uterus. Slippery elm, tupelo or sea tangle can be used. The resort to these seems perfectly justifiable where the arrest of uterine metamorphosis soon after delivery seems to have assumed an obstinate phase.

Another measure that has been used by the advocates of manipulative treatment is massage—uterine massage. The American physician evidently needs educating in this measure, because it is an extremely easy matter to deride it and politely cough it down. The most incredulous physician needs but a few instances illustrative of the extremely rapid and satisfactory cure of this class of cases to satisfy him of the excellencies of uterine massage and to make him an earnest advocate of it.

TO RECAPITULATE: The aim of this paper is to contribute to the totality of our knowledge of the causes of gynæcological disorders, and to assist in creating opinion which shall eventuate in obstetric authorities imparting more correct and elaborate teaching as to the obstetrician's duties to women after confinement. It is less than thirty years since any definite opinion has been expressed by the authorities mentioned, as to how long a time the uterus requires to return to its natural proportions after its evacuation. Smellie claimed but three weeks and Scanzoni sixteen weeks for the period of normal involution. This difference of opinion arose from the lack of attention involving extended observation upon this subject. Let any physician, profoundly convinced that text books do not teach with sufficient emphasis the duty of the obstetrician to recently delivered women, as indicated by the result of dispensary observations in this particular, attempt to keep his post-puerperal patients under observation beyond the customary "three days after delivery," and he

will soon be brought face to face with the fact that the obstetric custom of to-day compels him, perforce, to be a prolific contributor to the myriads of gynæcological patients so surprisingly discovered in this generation.

Future works on obstetrics will be incomplete if they do not include definite and minute instructions as to the care of the post-gravid uterus. They should teach that so long as the fundus uteri rises above the symphisis pubis, the patient should rest more than she exercises—that, when the progressive character of involution is arrested, the minutest attention to the patient's general condition is demanded, together with special measures to secure the continuance of a diminishing of the uterus to its normal size.

I. Among the causes of defective uterine involution may be included:

(*a.*) Faulty nutrition.
(*b.*) Diathetic taints.
(*c.*) Anæmia.
(*d.*) Obstinate constipation.
(*e.*) Lacerations.
(*f.*) Faulty hygiene.
(*g.*) Depressing emotions.
(*h.*) The marital act.
(*i.*) Neurasthenia.

II. The treatment recommended embraces:

1. *General Treatment:*

(*a.*) Correction of all alimentary derangements.
(*b.*) Removal of anæmia.
(*c.*) Neutralizing of the effects of diathetic taints.

2. *Special Treatment:*

(*d.*) Closing of lacerations and using of needed mechanical supports.
(*e.*) Ergot by stomach or rectum.
(*f.*) Hot water injections *per vaginam vel rectum.*
(*g.*) Dilatation by using tents.
(*h.*) Uterine massage.

DISCUSSION.

DR. JACKSON: I regard the paper as one of very great interest and full of important suggestions. The statement, however, that more than 75 per cent. of our gynæcological cases are dependent upon sub-involution of the uterus or any other result of

parturition which should be a physiological process, is, to say the least, a startling one; and if it be correct, the fact shows the great importance of adopting proper measures for the prevention of such consequences. In a general way I can endorse the treatment advised by the essayist for this purpose; attention to the state of the bowels, kidneys, skin, the timely use of ergot, etc.

I have found ergot especially useful in cases where the uterus is enlarged and still soft in texture before the indurated stage is reached. Arsenic is also useful in these cases. In those of long standing, where the uterus is hard and enlarged, I have frequently applied the fuming nitric acid with excellent result.

The hot water douche, while frequently an excellent and useful remedy, is not always so. The blanching of the vagina and vaginal portion of the uterus produced by its employment is not of long duration. I have seen these parts a half hour after being thus blanched become fairly purple from the congestive reaction. Then too some persons suffer so much from flushings of the face and headache after its use as to make it an unsuitable remedy at least for them.

DR. EARLE said that if the figures presented to us were correct, the accidents and bad results incident to child-bearing must be far greater among the poor than among all other classes. In a practice of ten years, mainly among the middle class, with a moderate percentage of the upper or more wealthy part of the people, not two per cent. had ever applied for any uterine treatment of which child-bearing was thought to be the cause. The surroundings of the lower class, and the kind of food which, from necessity, they must take, had much to do with producing the condition described by the essayist. At least four of the symptoms enumerated were due to hard work and poor food, namely bad nutrition, diatheses, anæmia and constipation, and it hardly seems necessary to me to refer them to child-bearing.

Two important causes of disease peculiar to women were prevalent among the very poor, and in many cases it was impossible for the physician to do away with these causes. I refer particularly to too early getting up after confinement, and secondly to the debility following a long course of lactation where there is

insufficient food with really more work than any nursing mother should be allowed to perform.

I am an advocate for at least two full weeks' rest in bed for every lying-in woman. I know, however, that it is impossible for many to give this time; and then there are those who oppose it—certain nurses and a few physicians who seem to think it is the best procedure—indeed, the creditable thing—to get a woman out of bed the second or third day after delivery. I believe it to be absolutely wrong to encourage this, for I am sure it gives rise to many of the symptoms to which our essayist has called our attention. And further, lactation among some of these women, especially those who are obliged to work very hard, and from pecuniary causes are unable to have a varied and generous diet, is frequently followed by these same symptoms.

Later in the discussion, PROF. MILLER took exception to what he understood to be Dr. Earle's opposition to mother's nursing their children.

DR. EARLE explained that he did not oppose lactation—indeed, always favored it. Art could not supply a substitute; yet with insufficient food for the mother, in addition to hard work, it did seem to him that debility, prostration and anæmia frequently occurred without the factor of child-bearing entering as a cause.

DR. ETHERIDGE: The objection to hot water injections producing temporary anæmia, followed by increased turgescence, holds good only where occasional injections are used, small in amount. When they are resorted to three or four times every twenty-four hours, to the extent of six or eight quarts each, the blanching effect of one injection remains till the next one is used. Hence frequent large injections are recommended.

Attention to the alimentary functions is of the highest importance. The tendency to portal engorgement, with its resultant anorexia, stomachic and intestinal indigestion, and constipation, can be best removed in most cases, by the use of laxative—not cathartic—doses of mineral waters. An extensive use of the various waters has resulted in a preference for the "Ofner Rakoczy Bitterwater." A wineglassful in one-third or one-half a cup of warm water or warm milk in the empty stomach mornings, will produce an astonishing effect in quickening a sluggish

portal circulation, removing effete products (and thereby becoming a veritable "blood purifier"), and in invigorating the appetite and the secretions of the alimentary secernents. The result of thus using the Rakoczy water is a digestion of more food, and the elaborating of more healthy blood, which is the only groundwork of permanently correcting faulty nutrition. The dose must be increased or diminished to suit each individual case, the end sought being a natural, daily fecal evacuation, without nausea or griping. Calling this water by its other name—a "blood purifier"—removes a popular objection to daily catharsis. Continuing its use for six weeks will result in a new order of portal nutrition which does not demand its continuance.

It is a curious clinical fact that where an active purgation is demanded, the color of the feces indicates a definite distinction of choice between mercury and podophyllin; where the dejections are too light, mercury is followed by the best results. When they are too dark, podophyllin should be used. Physiology teaches that between three and four pints of bile are poured into the duodenum every twenty-four hours. Nearly all of this bile is re-absorbed, passes through the liver, is re-excreted and again passed into the bowel. Day after day and week after week throughout life the liver is incessantly active, secreting and excreting. Were this hepatic function checked to any great extent, dire disaster would result. It is a gross error to hold that "the liver is inactive"—"is dormant," etc. The fact is, that, like the kidneys and heart, it never sleeps till death supervenes. What results when a "cholagogue cathartic" is given, followed by "bilious discharges," is, the stepping in between the progress of the bile along the intestine and its re-absorption, and preventing the latter. As a result, this fluid is hurried along the canal, and it makes its appearance in the dejecta. The mercury or podophyllin does its good work by removing thus old bile practically worn out, and hence an excretion which ought to be removed, and enables the liver to purify the general circulatory torrent by eliminating from it the biliary constituents, which in excess cause the so frequently observed condition known as icterus. In this way the obstetrician can contribute to removing "faulty nutrition" in post-puerperal patients.

A lacerated perineum ought to be closed immediately after delivery. A lacerated cervix ought to be closed as soon as it is evident that involution is arrested. Where involution is complete, the propriety of operating for cervical laceration becomes a debatable question.

The use of ergot may be resorted to from delivery, and continued or suspended *pari passu* with the slowness or promptness of involution.

The objection that the 78 per cent. alluded to is applicable more to dispensary than to private practice, and that this proportion is too high because it excludes virgins, is difficult to substantiate, because in a city—*e. g.*, Chicago—it is easy to ascertain how many deliveries at term occur, and it is absolutely impossible ever to know how many abortions occur in "virgins" as well as in married women. It is as impossible to know how many gynæcological patients there are who never consult physicians for their diseases, and yet are veritable sufferers from uterine disease arising from defective involution.

Another item for contemplating in the syllabus given is the 17 per cent. of causes headed "unknown." Could the facts be known about each one of those seventeen cases, it would probably be found that the majority arose from defective involution. And it would in all probability be more nearly correct to maintain that the 78 per cent. should be brought up to the neighborhood of 90 per cent.

The subject of rest alluded to by Professor Miller is of such acknowledged importance that but one opinion concerning it can be entertained. I fail to appreciate the ambition manifested by some practitioners to have lying-in women get up early after confinements. It is impossible for any one to appreciate the intrapelvic changes after delivery without deciding in all cases that the only safe course is to advise more of rest than exercise so long as the fundus rises above the pubic arch. Ten days ought to be a minimum time for a patient to remain in bed after delivery. I always advise a woman to remain in bed three weeks rather than ten days.

ARTICLE III.

PROF. CLAY'S NEW CANCER CURE. By EDMUND ANDREWS, A. M., M. D., Professor of Surgery, Chicago Medical College.

Widespread attention is being attracted on both sides of the Atlantic by a remarkable new series of experiments on the treatment of cancer by internal administration, recently published by Prof. John Clay, of the Queen's Hospital, Birmingham, England.

The alleged curative agent, a mixture of Chian turpentine and flowers of sulphur, bids fair, for a time at least, to rival the once famous Cundurango in its reputation as a cancer specific. Concerning its value in this disease, Prof. Clay makes the following assertions, supporting them by a number of cases: "The turpentine seems to act upon the periphery of the growth with great vigor, causing the speedy disappearance of what is usually termed the cancerous infiltration, and thereby arresting the further development of the tumor. It produces equally efficient results on the whole mass, seemingly destroying its vitality, but more slowly. It appears to dissolve all the cancer cells, leaving the vessels to become subsequently atrophied and the firmer structures to gradually gain a comparatively normal condition.

"It is a most efficient anodyne, causing an entire cessation of pain in a few days, and far more effectually than any sedative I have ever given. In the cases I have described no sedative was given in any instance, although in some cases, where great pain had existed previously to commencing the treatment, large doses had been given. Whether this arrest of pain arises from the death of the tumor or, as my son suggests, is due to there being no longer irritation of the sentient nerves (in consequence of the tension being withdrawn by the removal of the cells), the fact is the same.

"If, after the use of the remedy for some weeks, one of these cases were examined by a stranger for the first time he would probably conclude that it was one of commencing malignant disease, by reason of the irregularities of the surface. The effect of the remedy being first to remove the cellular structures, any loss

of tissue produced by the invasion of the disease cannot be restored, and hence the irregular touch and appearance, even after cicatrization. The arrest of the hæmorrhagic discharge, and the remarkable freedom from glandular affections, after a lengthened use of the turpentine, are especially important factors in materially aiding the removal of the cachexia, and of improving the general condition of the patient.

"Without being in a position to affirm that the Chian turpentine is a positive cure for advanced cancer of the female generative organs, yet, however the facts here adduced may be interpreted in this respect, two circumstances are indisputable—one, that all the patients, after several months' treatment, are living, and that the disease has not advanced, as is usually the case, but has retrogressed—in fact has all but disappeared; and it may at least be safely asserted that when the remedy is steadily used for some time, it arrests the progress of the disease, and relieves the pain incidental to the morbid growth in a manner which cannot be said of any other remedy."

The daily papers have reproduced Prof. Clay's articles, and the laity as well as surgeons are making vigorous demands for the drug. Persons in Chicago, without waiting for medical advice, have telegraphed to New York and even London to procure it. Under these circumstances, the question of the genuineness of the agent becomes of great importance.

Telegraphic inquiry of a leading and reliable house in New York has assured me that there is no genuine Chian turpentine in this country. The article sold under that name by some of the Eastern firms is a fraud, and consists of Venice turpentine flavored with aromatics. The *Chemist and Druggist*, a London pharmaceutical journal, asserts that there is very little of the genuine in market in that city, and publishes letters from the vicinity where the substance has been procured heretofore, showing that now there is none to be obtained either in Athens or Smyrna, except some fraudulent imitations.

Meantime there was resurrected from the Apothecaries' Hall in London an old cask containing fifty pounds of the genuine article, which had lain untouched for nearly half a century. This was quickly sold out at fabulous prices, so that, as the *Chemist*

and Druggist remarks, the cask "proved a small gold mine." A gentleman in Chicago, who has influential acquaintances in London, has obtained a small amount of the genuine article from the same stock that supplied Prof. Clay. As its identity is perfectly proved, and it exactly corresponds to all the tests mentioned by Prof. Clay, I have ordered more by telegraph from the same source.

It appears, therefore, that we are on the eve of a great demand for Chian turpentine. The price is running up at a fabulous rate. and will, no doubt, flood the market with fraudulent imitations.

It is important, therefore, to consider whether any efficient substitute for the real drug can be procured. Chian turpentine is named from "Chios," one of the names of the Island of Scio, where it is produced. It is also found on the Island of Cyprus, and is sometimes called "Cyprus turpentine." Unlike most of the resins, it is not the product of a coniferous tree, but of the *Pistacia terebinthus*, belonging to the natural order *anacardiaceæ*, to which belong also the sumacs, poison ivy (*Rhus tox.*), and *Rhus aromatica.*

In default of the genuine Chian turpentine, it will be rational at present to use the resins of other trees of the same genus, which probably contain similar medicinal properties.

Ordinary mastich is a resin in its physical and chemical qualities closely similar to Chian turpentine, and it is produced from a tree of the same genus, *P. lentiscus.* This drug can be obtained in purity, although somewhat costly, and may be prepared in the same combinations as the Chian turpentine. The latter drug has been used by Professor Clay in the form of an emulsion, giving eight grains of the turpentine and six grains of flowers of sulphur to each dose, three times a day. Mr. E. H. Sargent, 125 State street, of this city, has prepared a confection of mastich and sulphur which seems more likely to be agreeable to many patients than the emulsion.

Whether this new remedy will prove of value, or will go the way of its predecessors into obscurity, is yet to be determined.

Prof. Clay's statements are clear and positive. Some experiments made by myself and by others in this city would seem

thus far to corroborate his assertions, but we have not carried them far enough as yet to be able to state whether the apparent improvement will be permanent. An important question arises as to whether Prof. Clay is not mistaken in giving Chian turpentine, rather than sulphur, the primary place in his prescriptions. The malignant element in cancer appears to be the non-adherent, multiplying cells which fill its cavities, and so far as we can judge, its disastrous results are dependent on the enormous power of reproduction of these bodies. If there be a substance in the Materia Medica which can act upon these cells as antiseptics act upon bacteria, by destroying their life, or can modify their vitality, so as to check their multiplication, as arsenic checks the production of epithelial cells in scaly diseases of the skin, such a remedy will cure cancer. Cells already in existence would either be absorbed or remain harmless, if they no longer multiplied.

These cells, in short, suggest to one many analogies with such low forms of organic life as are destroyed by sulphur, arsenic, carbolic acid, etc. The analogy is vague, and not implicitly to be trusted; nevertheless it strongly suggests that the efficacy of this combination may be due to the cell-destroying power of the sulphur or of sulphurous acid, and that the turpentine may be only an adjuvant. Be this as it may, whenever we are unable to obtain genuine Chian turpentine, it would seem best, under the circumstances, to give sulphur in full doses, and to substitute the resin of the *Pistacia lentiscus* for that of the *Pistacia terebinthus*.

The *British Medical Journal* says that the Chian turpentine has been tried in the London Cancer Hospital without any success. It does not state whether the sulphur was used with it or omitted, nor whether an indisputable article of the turpentine was obtained.

No. 6 SIXTEENTH ST., CHICAGO.

ARTICLE IV.

QUINQUINIA—WHY IT SHOULD BE USED BY COUNTRY PRACTITIONERS. By JAMES S. WHITMIRE, M.D., Metamora, Ill.

It has always been impressed upon my mind that if there could be prepared from the cinchona bark a preparation containing all the alkaloids of the bark, including all the active principles that remain in the mother waters after the crystalizable alkaloids have been separated—the so-called chinioidine—that we would not only have a better tonic and febrifuge, but that we would establish a system of economy in the use of the bark and its preparations, that is becoming more and more necessary from year to year on account of the destruction of the forests of this tree in their indiginous, or native, haunts. The chief source of the world's supply of the bark has been and still is the South and Central American states. The Colombian states, Peru and Brazil are probably the greatest source of the world's supply of the bark of any of the South American states; and, though the bark is one of the main sources of revenue that some of those states possess, yet the government has taken no steps to prevent the destruction of the trees; besides, it has been ascertained that the bark of the root is more valuable, on account of its being richer in alkaloids than that from other portions of the tree, and, therefore, whole forests of all the species are being swept from the face of the earth on account of this character of vandalism. My son, C. L. Whitmire, who went to Honduras, with others from the Illinois Industrial University, tells me that the cinchona tree grows and flourishes among the mountains and table lands of the isthmus to a considerable extent, but there is so little industry or enterprise among the natives that the bark is not gathered to any great extent, and when it is gathered at all the tree is cut up root and branch, so that in time the total de-destruction of the forests is inevitable. Besides these considerations the instability of the Central and South American governments, their internal feuds, and petty wars with one another all tend to lessen the supply of this now indispensable drug, because

one state cannot inflict a greater calamity on another, between which there is a conflict, than to destroy not only the native growth of the cinchona tree, but they not unfrequently destroy the plantations of the tree, where there has been forethought and enterprise enough in the different states to cultivate its growth. Why is it that more of the different governments of the earth have not taken these facts into consideration and begun the cultivation of this invaluable tree? Certainly nearly all must know the growing scarcity of the bark, and also know that without the fostering care of government in its propagation that every species of the tree must become extinct in their native wilds. There is no estimating the value that the bark of the cinchona has been to the world. It has enabled the people to settle in and develop the waste places, and the most valuable of our agricultural lands have been rendered inhabitable by the use of this drug, which, even to this day, would have remained undeveloped. Brazil and Peru are the only two South American states that have made any considerable progress in the cultivation of the cinchona tree.

In this they have shown great wisdom. The British government has shown great forethought and wise counsel in having introduced the cultivation of the tree in her Indian possessions as well as in the island of Jamaica in the West Indies. The Dutch have introduced it, successfully, in the East Indies, and the French in the island of Bourbon and in Algiers. Now that several of the governments have had enterprise and philanthropy enough to banish all doubts as to its successful cultivation, it seems to me incomprehensible why the government of the United States may not follow suit and introduce its culture on her waste lands in the mountainous districts of southern California, Arizonia and New Mexico, the climate and other conditions being such as to almost insure its successful culture, it being known that it comes to perfection at an altitude of from 3,000 to 5,000 feet.

During the year 1879 there was more bark imported into the markets of the world than had ever been before, but it was, taken as a whole, vastly inferior in quality, it containing less of the alkaloids than that of former importations. This was owing, partly at least, to the fact that an inferior species of the tree had

been cultivated in the Indies, and, also, the vandalism that is permitted in the South American states, in the destruction of the best species of the native tree, for either gain or destruction. The facts as here stated, and which are undeniably true, should induce every physician who prescribes the alkaloids and every manufacturer who places them on the market to economize the products of the cinchona bark, so that no particle of any value whatever should be lost. This has really been the case with the cheaper alkaloids during the last few years, and each has been tried in turn in order to ascertain its true therapeutic value, and now the different alkaloids, exclusive of quinine, are used throughout the Mississippi valley, many physicians, particularly country and village practitioners, using the cheaper alkaloids almost to the entire exclusion of quinine. All the alkaloids, quinine, quinidia, cinchonine and cinchonia, are now in use as tonics and antiperiodics, and for many years the chinoidine has been pressed into the service as a prophylactic, and even as an antiperiodic, which quality it possesses in an eminent degree, though it is not so much used for that purpose, on account of its nauseating qualities, as the other products of the bark. Quinine is now fast becoming, on account of the price, out of the reach of the poorer class of our patients, and had it not been for the cheapness of its congeners, and their very general use, the price of quinine would have been now double what it is. Now, in order to avail ourselves of all the medical constituents of the bark, let us all, particularly country practitioners, who are compelled from necessity, on account of the lack of drug stores, to furnish our own medicines, give the quin-quinia a fair and impartial trial. This preparation of the bark is manufactured by Charles T. White & Co., of New York, and claims to contain all the the alkaloids of the bark, including the amorphous constituents contained in the mother waters after all the crystalizable salts have been separated—the so-called chinoidine. I have been using this preparation for several months in my practice, which extends to and along the Illinois river bottom, consisting of bogs and lagoons. The blood of the people living in the vicinity is, at all seasons of the year saturated with the malaria emanating from the swamps and marshes, so that I have given the quin-quinia a very thorough

trial, and, so far, it has never disappointed me in its action. At the commencement of its use I was a little chary in regard to placing entire confidence in its ability to interrupt a paroxysm of ague at an ordinary dose, so that I began at thirty-five grains, divided into seven powders, one to be taken every two, three or four hours, according to the circumstances as to whether it was a quotidian or tertian; then as other cases occurred I continued to lessen the amount used till I found that twenty grains would, in most cases, interrupt a paroxysm of simple intermittent. I soon began to use this preparation in every form of malarial poisoning, complicated or otherwise, when an antiperiodic or a tonic was deemed necessary. Finding that it acted promptly in every instance where it was used, I necessarily became more confident in regard to its action and was prepared to use it under any circumstances and in any emergency.

After I had come to this conclusion it was not long before an opportunity offered to try my faith in the virtues of the new drug. Mr. A. M., aged 30, usually stout, lived on the Illinois river bottom. June 1, 1880, I visited him, immediately, or as soon I could drive eight miles, and found him just rallying from a collapsed condition caused by an attack of pernicious fever—congestive chill. I gave him ten powders consisting each of quin-quinia grs. x., opii. gr. $\frac{1}{5}$, of which one was to be taken every two hours. The next day and the day after my patient missed the paroxysm, and then all the treatment he required was to continue the quin-quinia in from three to five grains every four or five hours during the daytime, so that in a few days he was able to labor about his farm and stable. I have also found that in large doses it has the property of lessening the animal temperature and producing quininism the same, or very nearly so, as that of the sulph. of quinine. Taking it all in all, I am greatly pleased with this new preparation of the bark and its action on the economy; and containing all the active principles of the bark as it is claimed, there is no reason why it may not become the popular remedy, particularly in charity hospitals and with country physicians who furnish their own medicines. It is retailed at one dollar an ounce, and will go two-thirds as far, at least, as an ounce of quinine. Taking its price into considera-

tion it will make quite a difference, annually, in the exchequer of of the country practitioner whose business lies in malarious districts; and so long as public sentiment compels the country practitioner to become the public medical almoner of the poor, it is necessary that we should use every endeavor, in justice to ourselves, where there can be no detriment to the patient, to make our expenses as light as possible, and by the use of this article in appropriate cases, economize the destruction of the bark, and thereby keep quinine and the separate alkaloids at a reasonable figure. While it is true that my experience with the use of quin-quinia has only extended for a few months back, yet it has proven so satisfactory in my hands that I feel it a duty that I owe to my professional brethren to recommend it for trial to all Western practitioners who have to furnish their own antiperodic medicines, believing that it will prove fully, if not more, satisfactory than either of the alkaloids separately, not excepting quinine—the king of antiperodics. Besides, I am particularly impressed in its favor on account of its having all the medical virtues of the bark, as it is claimed, combined in their natural proportions, making less bulk and tasting less bitter than any of the salts of the bark. It is a well known fact that when quinine has failed in chronic malarial poisoning to interrupt the irregular paroxisms, the bark has been resorted to in substance with marked benefit to the sufferer, and has answered the purpose when quinine, the other salts and arsenic combined had failed to effect a cure. These facts, generally known by the profession, are only necessary to be alluded to, to convince every one of the undoubted value of the quinquinia, if it is honestly manufactured and contains all the virtues of the bark as is claimed by its manufacturers.

METAMORA, Ill., June 13, 1880.

THE fourth annual meeting of the American Dermatological Association will be held at the Ocean House, Newport, R. I., on the 31st August, the 1st and 2nd September.—ARTHUR VAN HARLINGEN, M.D., Secretary.

Clinical Reports.

NOTES FROM PRIVATE PRACTICE.

ARTICLE V.

A Fatal Case of Acute Suppurative Otitis.

It happens but very seldom that an acute inflammation of the middle ear causes the death of the patient in the first week or fortnight. For this reason I thought that the report of the following case, which I have recently observed in consultation with Dr. S. D. Jacobson of this city, would not be without interest. The doctor has kindly furnished me the following memorandum of his observations:

April 23, 1880. Was called to see Mrs. S. M., 56 years old, of full habit, but enjoying good health until three or four days ago, when she was seized with violent pain in her head, particularly in the right side; also some deafness and a humming noise in the right ear. The next day there was already a purulent discharge from the ear, which, however, brought no relief. I found the patient up and dressed, with her head wrapped in a woolen shawl; face flushed, pulse 96, temp. 38.50, tongue coated; complained of intense headache, earache, loss of appetite and of sleep, constipation; could not hear the watch tick with right ear unless it was in contact with skull; with left ear heard watch at six inches. No complaints on left side of head. On the right side great tenderness of ear and mastoid region, purulent discharge from meatus. Ordered hot-water injections in ear, an aperient and iodide of potassium with bromide of potassium internally.

April 26. Improving. Headache not so much. Discharge diminishing, as also tenderness of right ear. Commenced to-day

to complain of severe pains in left ear, with tinnitus in the same; watch not heard except when in contact. No discharge from left ear. Tympanum almost normal.

April 28. Improving slowly; had less pain.

April 29. Had a chill to-day, followed by heat and perspiration; temperature 40.2 in the evening. Ordered quinine.

April 30, morning. Temperature 39; slept after morph. syrup; headache intense; no discharge; membrana tympani of a dull, red appearance not bulging. On account of intense pain: paracentesis.

May 1. Purulent discharge from left ear since yesterday; headache less; had another chill with perspiration afterwards.

In the forenoon of May 2, I saw the patient and noted the following condition: Temperature 40, pulse 80; tongue coated and dry; eyes half closed; pupils of equal size; patient did not answer to questions, indifferent to everything, though conscious; but very restless, constantly moving the upper and lower extremities. Right ear, moderate purulent discharge, without any complication. Left ear, a small quantity of sanguinolent pus in external meatus; large opening in membrana tympani, showing the mucous membrane of the tympanic cavity in a highly vascular and swollen state. There was some swelling and induration behind, above and in front of the ear; it was more marked in the temporal region than any where else.

In the afternoon of the same day, Dr. J. found complete paralysis of left side of face and right side of body; loss of consciousness; retention of urine, and involuntary evacuation of bowels; temperature 41. In this comatose state the patient continued thirty-six hours, and died early in the morning of May 4th.

I regret that the autopsy could not be obtained in this case; for it would have been very interesting to ascertain positively the extent and nature of the fatal complication, and also to find out—if it was possible—why the disease took that insidious course in the left ear, while it proved so mild and manageable in the right ear. Without autopsy our diagnosis amounts only to a conjecture suggested by the prominent symptoms of the disease. The succession of the graver symptoms was as follows: Violent

inflammation of the left tympanum, repeated chills, œdema about the ear, cerebral excitation followed by coma and paralysis. This train of symptoms, I think warrants the conclusion to be drawn that death resulted probably from thrombosis and phlebitis of the lateral sinus, and pyæmia. As evidence of thrombosis and phlebitis, I regard the œdema about the ear and the cerebral excitation preceding the comatose stage; while the repeated chills and high fever are manifestations of pyæmia.

One symptom which is considered pretty good evidence of phlebitis of the lateral sinus, but which was not clearly developed in the above case, is an induration and swelling of the tissues of the neck. The presence of this symptom in one case, and its absence in another case, is easily explained. We know that the lateral sinus is in direct communication with the cervical veins through the *venæ emissariæ mastoideæ*, which emerge just behind the mastoid process. These emissary veins therefore furnish an easy route by which the phlebitis of the lateral sinus can be propagated to the extra-cranial veins. Whenever this occurs, we shall probably observe the induration and swelling in the tissues of the neck, which, together with the other symptoms, will aid us materially in diagnosticating the intra-cranial phlebitis. But the phlebitis need not necessarily take this course; the emissary veins need not be implicated, and then, of course, the above symptom will not be observed.

Dr. J. Orne Green has recently published* an interesting account of four cases in which the diagnosis of phlebitis of the lateral sinus was chiefly based upon this induration and swelling in the tissues of the neck. All of the cases were fatal, and in the fourth case the autopsy was obtained and confirmed the diagnosis. In two cases there had been a discharge from the ear for many years, and the fatal phlebitis was developed in the course of an acute relapse of the suppurative inflammation; in two cases it followed an acute inflammation of the tympanum.

A very typical case of this kind was reported by me at the meeting of the Illinois State Medical Society in 1876.† The case took an unusually rapid course and sudden end; and as the

* *American Journal of Otology*, July, 1879, and April, 1880.

† Transact. of Ill. State Med. Soc. 1876, p. 89.

transactions of the State society are accessible but to a very limited number, I will reproduce it.

"*Acute Suppurative Otitis; Phlebitis and Thrombosis of the Lateral Sinus; Death from Pyæmia.*

"Chas. L., forty-five years old, had always been in good health, except suffering from chronic catarrh of the naso-pharyngeal space and from a slight deafness. In February, 1876, he had an attack of acute catarrhal otitis, and a large syphilitic ulcer in the left tonsil. Both affections were speedily cured; but after taking cold again, he returned, on February 28th, complaining of great pain in the right ear. External ear and mastoid region showed nothing abnormal; meatus was wide and natural; membrana tympani intensely red. The weather being very unsettled, I advised the patient to remain in the house, and ordered leeches behind the ear, and hot water poultices.

"March 1.—Leeches gave great relief; but instead of warm water, dry compresses were put on the ear. During last night he had violent pain; no appetite; pulse 90; tongue coated; meatus so swollen that membrana tympani could not be seen. Mastoid region neither red nor swollen, but about the mastoid foramen there was a small spot which was exceedingly tender. Leeches again.

"March 2.—After the leeching the pain subsided, and the ear began to discharge. Still he was very restless last night. Meatus less swollen, filled with muco-purulent secretions; membrana tympani perforated. Morphia at eight.

"March 3.—Slept well and felt very much better, tongue cleaner, appetite improving; no pain in the ear or head; that tenderness about the mastoid foramen, and great restlessness his only complaint. He was up all day, took a light dinner and supper and retired about 9 o'clock feeling quite well. After midnight he complained of feeling chilly though the room had a very comfortable temperature; very soon after this he had a violent chill of half an hour, followed by high fever, quickened respiration and delirium. Towards morning he vomited several times and became comatose.

"March 4.—I found him in the following state: Pulse 120 and

small; skin hot and covered with profuse clammy perspiration; face sallow; eyes widely opening and pupils dilated; did not recognize anybody, and was talking continuously. The discharge from the ear which was very copious last night had a chocolate color. No swelling of the mastoid region; but below it there was a diffuse, indurated swelling of the tissues and a redness of the integument of the neck; the induration followed chiefly the course of the internal jugular vein and was evidently very tender, for when I pressed on it the patient groaned. Respiration very quick, and superficial auscultation did not reveal anything abnormal. In this comatose state the patient continued until his death which occured in the afternoon.

"*Autopsy.*—Eighteen hours after death. The right side of the neck showed extensive redness of the skin and a diffuse swelling of the tissues. No œdema of mastoid region; but its subcutaneous tissues extensively reddened by hæmorrhagic effusion due to the leeching; periosteum and bone normal. Skull of normal thickness; sub-arachnoidean spaces contained some serum; pia mater hazy over both hemispheres; the veins filled by a very dark liquid blood. Substance of brain firm, its ventricles empty.

"The left lateral sinus in its entire length was filled with dark, liquid blood. In the right lateral sinus, as far as it runs along the petrous portion of the temporal bone, we found a greyish red thrombus which was firmly adherent to one side of the sinus and which could be traced down into the jugular foramen. The jugular vein was filled by a dense firm clot which presented the brownish granular appearance of a coagulum formed some time before death; the inner coat of the vein was red and slightly rough—indicating the existence of phlebitis. A section of the common carotid, several inches long, was removed, but it presented nothing abnormal. The petrous bone was red, but not softened or eroded. The mucous membrane of the tympanic cavity was intensely red; the cavity as well as the mastoid cells were filled with puriform matter."

Dr. Danforth submitted the brain to further macroscopic and microscopic investigations, and kindly furnished me with the following notes: "The right cerebral lobe was intensely congested in every part; the meningeal vessels were generally occluded by

clots. The minute vessels of the pia mater and the more superficial vessels of the brain substance were very generally filled with a granular matter. This embolic condition was the rule in all the minute vessels of both hemispheres of the cerebrum."

In this case the different phases of the disease, from the simple acute inflammation of the tympanic cavity to the pyæmia, succeeded each other very rapidly, and the autopsy revealed the succession to have been as follows: acute suppurative otitis, involving early the mastoid cells; extension of the inflammation to the lateral sinus, which is separated from the cells merely by a thin osseous wall, perforated usually by numerous foramina, for the passage of minute veins from the cells to the sinus; phlebitis of the sinus and formation of a thrombus which extended into the jugular vein; pieces of this thrombus were torn off, broken up into small detritus while circulating with the blood, and lodged as numerous emboli in the smallest arterioles of the brain and meninges, causing instant coma and death.

F. C. HOTZ, M.D.

CHICAGO.

ARTICLE VI.

The Bromide of Ethyl a Disappointing as well as a Dangerous Anæsthetic.

One of the chief reasons, perhaps, that medicine has not kept pace with other scientific advances, as is so often charged, is partially because experimentation in this field is liable to be attended with injury to life or health, and hence it is not every physician who feels heroic enough to put his theories to practical tests either upon himself or his patients.

While progressive persons in scientific medicine, as in other branches, are honored for their courage and praised for their independence, yet if they were not restrained by over-careful conservatism at the other extreme, they might do incalculable harm from too impetuous rashness. And again upon the other hand, ultra conservatism instead of simply standing still as it does, is kept by the progressive iconoclast from sliding positively backwards. Thus the two opposites, by reacting upon each other, produce the

vast middle class whose maxim in effect seems to be expressed by the poet's familiar lines:

"Be not the first by whom the new is tried,
Nor yet the last to lay the old aside."

In medicine it is through the careful plodding examination of this middle class that accumulated clinical testimony is obtained, and each new remedy, discovery or invention is ultimately, impartially branded in accordance with its attested merits. It is to offer my own experience, and my opinion therefrom, upon the bromide of ethyl that I make this report, so that when the sum total of testimony is made up we shall know whether the bromide of ethyl should be placed upon the shelf of usefulness, or consigned to the limbo of therapeutic oblivion—that Hades for "vaunted specifics."

For some months past the journals have contained a number of articles upon the subject of this new anæsthetic. Much has been said in its praise, and some little in its condemnation. It was so recently brought forward that very little could be said against it, as few knew anything practically about it. But when so great an authority as Dr. Turnbull and so eminent a surgeon as Dr. Levis united their voices in sounding its praises, the profession as one man stood breathlessly still and silently drank in with a willing and a listening ear all that was to be learned regarding a substance which was claimed to be superior to chloroform or ether, and which filled a requirement long felt, but never before met. Dr. Levis concludes his recommendation in these unequvocal terms: "I express my conviction that it is practically the best anæsthetic known to the profession."

After such an unqualified indorsement the great mass of physicians congratulatingly said to themselves, "What an excellent thing is the bromide of ethyl!" while surgery smiled a sad quiet smile of blissful satisfaction.

The bromide of ethyl was said to act speedily; to produce little or no nausea; to pass off quickly; to influence respiration but little; to affect the circulation but slightly; and to cause but trifling general excitement, less even than chloroform; and last, though not least, to be free from danger. Free from danger!

Believing and expecting to realize at least a part if not the

whole of these desirable conditions—a sort of anæsthesia made easy, as it were—a four-ounce bottle of John Wyeth & Bro.'s ethyl was procured, for which two dollars were paid—being a higher rate than is charged for the best chloroform—and following strictly the directions for administration as given by Dr. Levis, everything was in readiness for the trial, the result of which was to give such pleasure to the patient and such satisfaction to the operator.

The bromide of ethyl was given at separate times to two females, both being patients selected from the pratice of Dr. A. Reeves Jackson, and were deemed by Dr. Jackson and myself as good subjects upon which to fairly try the qualities of the anæsthetic.

It is not necessary that both cases should be recited, since one is a counterpart of the other, with the single exception that the first patient, after twenty minutes inhalation, exhibited bad symptoms and retained partial consciousness, so that the ethyl was abandoned for ether, which acted promptly and efficiently; while the second woman, the one I shall speak of on account of the sequel, knew what was going on around her after a trial of thirty-five minutes with ethyl, during which time alarming symptoms several times occurred. In this case also ether was substituted, which produced unconsciousness in about the usual time.

This second patient, whom I shall designate as Mrs. C., was to be operated upon by Dr. Jackson for uterine trouble. She was about 34 years of age, and not specially timid or nervous. She had eaten nothing upon the day set apart for the operation, and breathed the vapor of ethyl as well as persons commonly take anæsthetics; therefore the unfortunate result was no fault of hers. I gave the anæsthetic with unusual care and attention to every detail, therefore I think no just blame can be attached to me. Wyeth & Bro.'s goods are celebrated for their excellence, and this preparation of their house is specially commended by Dr. Levis himself, therefore it is evident that no blame should be attached to the chemist. It would seem, then, that the only fault was in the anæsthetic itself, and this I believe to be the fact.

But let us see how it acted, comparing the actual with the attributed results:

Its "speedy action" can hardly be said to be invariable, since twenty minutes in one case and thirty-five minutes in the other were consumed without producing unconsciousness.

So far as not producing much sickness is concerned, I never witnessed more intense and persistent nausea, or more racking retching by any anæsthetic before.

"Its effects pass of quickly." This I freely admit, "much too quickly." The very rapidity being a serous objection to its employment. A good prolonged fit of vomiting, such as the bromide of ethyl possesses the secret of occasioning—is very apt to be attended by a return to consciousness nearly before the patient is quite through the act.

"It only slightly affects the circulation." The pulse went up to a hundred and twenty, and did not fall much below, while the face became livid, the eyes deeply, dreadfully injected, and the veins of the head, face and neck were full and tense. So much congestion I never saw produced by an anæsthetic.

And as for the respiration, it was difficult and labored, and there was considerable rigidity, particularly about the chest walls, and at times approaching asphyxia seemed imminent.

If the general excitement caused by the bromide of ethyl is but "trifling," and what I witnessed was a trifling manifestation of its power proportionately reduced to suit female delicacy of structure and temperament, then I trust that I shall never be called upon to administer it to any full sized, vigorous, muscular mariner, in good fighting physical trim and in the usual blasphemous frame of mind.

And lastly it is said to be safe. Nothing that produces such conditions as were produced can ever be safe; nothing which presented such a picture of venous and pulmonary engorgement as was manifested in these women can possibly be safe. I have administered chloroform and ether in both hospital and private practice, and have been present on numerous occasions when these anæsthetics were given, but I never yet saw such dangerous and distressing symptoms produced as were developed under the bromide of ethyl. But further than this, let us inquire into its safety. It has been used but a short time—I think I may safely affirm that it has never been generally employed—and yet we

have already two recorded deaths, which prove it to be, for the use it has received, one of the most dangerous anæsthetics known to modern medicine. One of the fatal cases, a woman, was reported by Dr. Hine, and the other, a young man of 18 years of age, occured in May last at the clinic of Dr. Levis—the guide, philosopher, and friend of "the best anæsthetic known to the profession." This last young man, the post-mortem disclosed, had "diseased brain, heart, lungs and kidneys." He had too much, for he had also a stone in the bladder, and—bromide of ethyl.

Now a word as to the comparative merits of the anæsthetics to show that there was no idiosyncrasy. It so happened that Mrs. C. required a secondary operation which was performed a few weeks after the one to which I have alluded. Ether was given, and in thirteen minutes from the commencement, without a single alarming symptom, without excitement, and without nausea, she was completely anæsthetized and ready for the operating table.

JOSEPH C. MOORE, M.D.

CHICAGO, July, 1880.

ARTICLE VII.

Epidemic Conjunctivitis.

I have lately met with a number of cases of inflammation of the conjunctiva, which, in some respects, differ from ordinary conjunctivitis.

These cases seem to be the results of some epidemic influence. Persons are attacked without having in any way changed their usual habits of life or been exposed to cold, dust, contagion or any other discoverable cause.

The onset of the disease is tolerably rapid. The first symptom is a slight feeling of irritation at the inner canthus of one eye, with a slight injection of the vessels. The injection increases rapidly, and, in from six to eight hours spreads over the whole conjunctiva, the redness does not, however, become so intense as to prevent the white sclerotic from shining through. The feeling of irritation does not increase with the redness, it rather grows less, and there is never found during the whole course of the disease

the feeling of sand or sticks in the eye, so characteristic of ordinary conjunctivitis.

Very soon after the first sign of redness of the conjunctiva, a creamy, yellowish-white discharge appears. At first this is scanty and lies in little rolls in the palpebral folds. These rolls are forced out by the movements of the lid and cause considerable annoyance by coming in front of the pupil and obstructing the field of view, sometimes the discharge is spread in a thin layer over the front of the cornea. This can easily be removed and then the vision appears to be as good as ever until it re-appears. Seen under the microscope the discharge shows all the characteristic of ordinary pus. Soon after the beginning of the discharge the lids begin to swell, sometimes swelling enough to close the eye.

At first there is no apparent interference with vision except the mechanical ones first mentioned, but after a few hours a mist before the eye begins to be noticed after looking intently at any object for a short time. This fog can be dissipated by an effort or by the appearance of any object which strongly fixes the attention, but reappears much more dense in a short time, or when the attention is relaxed. After resting the vision becomes clear again.

If the attempt is made to continue the use of the eyes after the appearance of the fog, a feeling of fatigue is experienced which soon increases to one of actual pain. After a few hours, vision becomes so indistinct that it is difficult to see minute objects clearly and larger ones appear to be surrounded by a halo and more or less of a fog envelops every thing. By a strong effort of attention this fog can be partly dissipated but not entirely.

In from two to three days the swelling of the lids disappears, the discharge and injection of the conjunctiva remain for a week or so longer. The difficulty of using the eyes, however, remains for a considerable time after all other symptoms have dissappeared.

In some cases the swelling of the lids and the discharge is less but there are paroxysms of pain in the eye. These paroxysms have a certain periodical character, the patient being free from them for a considerable portion of the day, but feeling them come on at some pretty definite time, usually late in the afternoon. Some of these cases are troubled with double vision, or rather multiple vision, seeing many objects, half a dozen in some

cases in place of one. Occasionally there is a sort of photophobia. Such patients prefer to be in a darkened room, a slight increase in the intensity of the light causes a sensation of not exactly pain but rather of dazzling, as from a very bright light.

I have seen cases in which the trouble was confined to one eye, especially in the lighter cases; but usually in a few hours after the beginning of the trouble in one eye, it appears in the other also, running the same course though often somewhat lighter.

The cases seem to be accompanied with no special derangement of health, so far as I can discover.

I have heard of these cases in almost every quarter of the city. And lately, on a visit to central New York, I learned that there had been a number of similar cases there.

The treatment that has seemed to succeed best has been the instillation of a solution of borax in rose-water or in ordinary distilled water, of the strength of ten grains to the ounce, every two or three hours. The addition of a little atropia seems to relieve the cases attended with pain. LESTER CURTIS.

No. 1558 WABASH AVENUE, CHICAGO, July, 1880.

ESSENCE OF WINTERGREEN AS AN ANTISEPTIC.—M. Perier. (*Journ. de Méd.*, May, 1880.)—The essence of wintergreen, on account of its powerful antiseptic action and its agreeable odor, is recommended by M. Perier. He uses it mixed with vaseline, 1 part to 100, for lubricating instruments, and his hands for vaginal examinations, and prefers it to carbolic acid. He also uses a solution of it for bathing wounds and for simple dressings.

REMEDY FOR ACUTE CORYZA.—M. Yron. *Journ de Méd.*, May, 1880.—The author recommends the following powder to be used as snuff:

Subnitrate of bismuth	20	grams.
Powdered benzoin	10	"
Tannin	4	"
Chlorhydrate of morphine	0	10 centigrams.

Society Reports.

ARTICLE VIII.

THE MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of this board was held at their rooms in the State Capitol, at Lansing, on Tuesday, July 13th, commencing at 9 o'clock a. m. The following members were present: Dr. R. C. Kedzie, president, of Lansing; Rev. Dr. D. C. Jacokes, of Pontiac; Dr. Henry F. Lyster, of Detroit; Dr. J. H. Kellogg, of Battle Creek and Dr. Henry B. Baker, secretary.

Dr. Lyster called the attention of the board to syphilis, a disease to which but little attention was paid by sanitarians, but which causes much sickness and many deaths in this State. He was requested to prepare a paper on the subject and present it at the next meeting of the board.

The resignation of Dr. H. O. Hitchcock, of Kalamazoo, as a member of the board, and the appointment of Prof. E. A. Strong, of Grand Rapids, by the governor, were announced and the following resolutions were adopted:

Resolved, That in the retirement of Dr. Hitchcock from membership in this board, the board loses one of its most efficient and distinguished members.

Resolved, That the individual members of the board regret the personal separation thereby entailed, and extend to the retiring member their best wishes for his continued prosperity.

A letter from Dr. Hitchcock commended very highly his sucessor, Prof. Strong, as also did other members.

BOARD OF HEALTH IN DETROIT.

The secretary presented a communication from F. G. Russell, city attorney of Detroit, suggesting that the state board address a letter to the mayor and aldermen of that city, recommending the organization of a board of health, and the appointment of a health officer.

Dr. Lyster said there was no way of getting reliable statistics relative to sickness and mortality in Detroit. The record of interments is the only source of information, and is not reliable, as the reports of the city clerk are voluntary, and there are many interments (especially of Israelites) outside the city. The old board of health was not efficient because unwieldy, but the "sanitary squad," of the police force, does some efficient work in enforcing the ordinances relative to garbage, etc. The city police, however, oppose the appointment of a health officer, fearing it will interfere with the work of their "sanitary squad." It was suggested that perhaps the people of Detroit did not wish the real facts relative to sickness and death disclosed. Drs. Lyster and Baker were appointed to prepare a plan for a board of health in that city and endeavor to secure its adoption.

SICKNESS AND PAUPERISM.

A communication was presented from Hon. H. W. Lord, secretary of the state board of corrections and charities, relative to pauperism as a result of sickness. After some discussion relative to the amount of pauperism caused by sickness, and the extent of the field over which a study into the subject should reach, a committee was appointed to investigate the subject, to be known as "the committee on the relations of preventable sickness to taxation," with Dr. J. H. Kellogg as chairman.

SANITARY SCIENCE EXAMINATIONS.

The remainder of the forenoon session was principally occupied with routine work and the perfection of details for examining and marking the standing of candidates in the examinations in sanitary science inaugurated the following day, and which require: "The replies on each set of topics shall be marked on a scale of 10, and an average standing of 70 per cent. on all topics shall be

necessary in order to pass the applicant." One who successfully passes the examination receives a certificate that he is considered qualified to act as health officer of any township, city or village in Michigan.

A paper on "unsanitary conditions in our schools," by G. E. Corbin, M. D., of St. Johns, was read. The paper consisted of details of overcrowding, bad ventilation and the sickness resulting therefrom, which came under his personal observation. The paper will be published in the report for 1880.

Two valuable papers by A. W. Nicholson, M. D., of Otisville, were presented. One was on "ozone," and contains details of numerous experiments, and one on "periodic fever," containing detailed records of cases and coincident meteorological conditions. The papers were accepted with thanks, and ordered printed in the annual report for 1880.

SANITARY CONVENTIONS.

The secretary reported that he had edited and prepared for publication the proceedings, etc. of the sanitary conventions held at Detroit and Grand Rapids during the past winter, and the copy was in the hands of the printer.

ADULTERATIONS OF FOODS.

Dr. Kedzie said he had received a request from gentlemen in Chicago to enter upon an investigation of adulterations of foods, and had replied that the board had no funds. He stated that the adulteration of sugar with glucose was increasing rapidly, and was being done more skilfully; that adulteration with pure glucose did not endanger health, but the sugar was not so sweet. The manufactured glucose, however, was unhealthful to take into the stomach, because of poisonous substances which are always associated with it. Dr. Lyster said a prominent candy dealer had informed him that all candies, except rock candies, were composed in part of glucose. Dr. Kedzie said nearly all syrups were made from glucose.

The board performed a large amount of routine work, such as auditing of bills, and adjourned until October 12, 1880.

Foreign Correspondence.

ARTICLE IX.

Messrs. Editors:—Rammatous hospital, founded in the year 1423, is to-day the largest and the oldest hospital of Genoa, Italy. Broad and high wards, good ventilation and plenty of light form its principal features. Although capable of holding nearly three thousand beds, another is in progress and almost completed, in a higher and healthier part of the city, at a cost of two millions of francs, kindly donated by the Duchess of Galliera, for such purpose. This is to be superior to any other hospital now existing in Italy, if not of Europe. The hospital abounds in plenty of material, medical as well as surgical and obstetrical, as is always found in the principal sea-ports. Clinics are given daily, and not being supplied with a suitable amphitheater the students are brought at the patient's bedside, where can be learned and studied fully and to better advantage the different ailments of mankind, many of which present special interest. I find in my notes a list of many interesting cases and opinions pronounced by the several professors, and selecting some of them I shall endeavor briefly to describe them to my medical colleagues.

The Medical Clinic is ably conducted by Prof. E. DeRenzi, the most talented and eloquent speaker of the faculty. During the past year he has presented at the clinic many remarkable cases, some of which he himself has published, and I have had occasion to note. Several have been cases of hemiplegia, and therefore a special attention was paid to the localization of the function of the faculty of language, for many patients presented a persistent or a temporary loss of speech. Such seat was determined by a series of uninterrupted studies and researches that began in our

century with the phrenological doctrine of Gall, Spurzheim and Combe, to terminate lastly with the studies of Broca, of Tamburini and of Ferrier. About the beginning of this century Gall, Spurzheim and Combe admitted the seat of speech to the cerebral convolutions situated above the posterior portion of the supra-orbital lamina. In 1825 Bouillaud distinguished amnesic aphasia from ataxic, and laid the seat of the faculty of speech in the anterior lobes of the brain. In 1836 Dr. M. Dax demonstrated at the medical congress, held at Montpellier, that the faculty of speech does not occupy both the anterior lobes of the brain, but exclusively the left anterior. E. Broca in 1861 laid it in the posterior part of the third left frontal circonvolution. The studies of Dax's son, who admitted the lesion of aphasia to the anterior and external portion of the left middle lobe, does not modify radically the precedent doctrine. A case of permanent aphasia, and several of transitory aphasia were observed in clinics, and from them it is easy to make two deductions of no little interest for the localization of the faculty of speech.

A case of permanent aphasia was observed in a patient brought to the hospital deprived of speech and affected with right hemiplegia. The intelligence was disordered, he perceived tardily and imperfectly. By the movements and by the sounds that he uttered, he showed that he yet preserved the perceiving faculties. Sight intact, and the pupils reacted normally to the influence of light. The hemiplegia at the right was well marked, the muscles paralyzed and contracted. The muscles of the right side of the face were totally paralyzed and had lost their tonicity. Patient somewhat reacted under the remedies, but grew worse and lastly was found in a state of complete coma, flushed face and temperature much higher; this state lasted two days, until finally the patient died. At the autopsy were found two hæmorrhagic clots in the brain, seated in the left circumvolution of the corpus callosum, a centimeter and half behind its frontal extremity. The second corresponded to the external portion at the inferior extremity of the left ascendens parietal circumvolution, which was considerably larger than the right one. The same hæmorrhagic clot extended deeply in the median portion of the white matter of the cerebral hemisphere, and was situated in front and to the left, immediately

beneath the island of Reil. This history which I have briefly described, shows in a clear and precise manner that a circumscribed lesion in the left cerebral hemisphere is sufficient, undoubtedly, to determine the loss of speech (aphasia). The seat of lesion in correspondence with the island of Reil, and at the point where pass the fibers arising from the posterior extremity of the third left frontal convolution, confirms the opinions of M. Dax and of Broca on the seat of the faculty of speech. In four other patients with cerebral hæmorrhage, in only one was found complete and permanent aphasia, and this is the above described case with right hemiplegia, and the apoplectic clot at the left. In other patients with temporary and incomplete aphasia, the hæmorrhagic lesion was found to the right, and the paralysis at the left. This sustains, to a certain degree, the opinion of Dax, who seated the seat of speech in the left cerebral hemisphere. A transitory aphasia hardly ever fails to manifest itself after the hæmorrhage in the right cerebral hemisphere that takes place near the psycomotor center of the facial. In private practice the professor said he had had occasion to notice complete aphasia, though transitory, in cases of hæmorrhage, which evidently had their seat in the right cerebral hemisphere. These cases, which are numerous and evident, bring us to the conclusion that the doctrine of Dax, Charcot, Falret, Broca, Hammond, etc., on the exclusive seat of the faculty of speech in the left cerebral hemisphere is incomplete. To assure ourselves in all clinical cases of permanent and transitory aphasia, complete and incomplete, we must admit two centers of the faculty of speech, situated one at the right and one at the left in symmetrical parts of the two cerebral hemispheres, the posterior part that is of the third frontal convolution, and the convolution of the island of Reil. The left center, in connection with the greater importance of the left cerebral hemisphere, requires a more considerable development and has a preponderating influence on the formation of speech, so that the destruction of the center of the seat of speaking, that is located in the right hemisphere, cannot cause the definitive and complete loss of such faculty; on the contrary, by the laws of compensation and adaption, which are most evident in physiological experiments and in the pathology of the cortical centers, the faculty of language very soon re-

appears normal as before. And respecting this the professor communicated an observation, not to be contradicted by further researches, because he had constantly verified it in numerous cases of cerebral hæmorrhage examined by him. That observation is that in all cases of hæmorrhage of the right cerebral hemisphere accompanied with marked paralysis of the facial, there exists also undoubtedly a temporary loss of speech. On the other hand, because of the greater development that the center of speech has in the left hemisphere, a lesion of such center produces the aphasia in a persistent and irreparable way. The predisposing influence of the left cerebral hemisphere in no other function shows itself more evident than in the formation of language. The explanation ordinarily given for this prevalence, not accounting the theories of Broca, Hammond, etc., consists in admitting that the prevalent use of the right hand is the cause of the greater development of the left hemisphere where terminate the nervous fibers of the right superior limb. Obernier says: (*Geschülste des Gehirns*) "Before learning how to call things with words, we habituate ourselves to indicate them with gestures of the right hand; moreover we learn with the indication of the right hand to spell words on tables, on books, and in consequence to designate things; and when in consecutive life we want to give brief commands, we express them not with words but with movements of the right hand, and when we want to speak with clearness we accompany the words with movements of the right hand; and lastly, in place of pronounced words we appropriate very often words written with the right hand."

Ferrier, in his *Pathological Illustrations of Brain Function*, speaks in the following terms: "The left hemisphere, as the right side of the body, is the conducting and impelling side; so that a lesion at the left side is the same as the loss of the right hand. A longer education is required to habituate the person to complete with the left hand all those delicate operations that could be completed easily with the right hand." Now that the education and the exercise of the right hand are not the only causes, nor the principle of the prevalence of the left hemisphere, the professor proved easily, by the history of a patient at the clinic, who was precisely left handed and therefore habituated to

do all her delicate work with the left hand. In this case by the lesion of the right hemisphere, if the theory of Obernier, Ferrier, etc., were correct, we would have found a persistent aphasia, or at least greater than the one verified, because the prevalent action of the left hand, would have determined a predominant development in the right hemisphere. So that besides the prevalent exercise of the right hand we have another cause for the development of the faculty of speech in the left cerebral hemisphere, and this cause consists probably in a congenital or hereditary disposition. For many generations the exercise of the right hand provokes a larger development of the left hemisphere, and such development reproduces itself hereditarily in the same manner that in sons and nephews are reproduced some peculiarities that were noticed in the organic type of their forefathers. Only as favorable conditions to the development of the left hemisphere, but surely as principal causes of the seat of the faculty of speech in the same hemisphere, the professor also cited the greater quantity of blood and the precocious development of the left half of the brain.

Milk cure, grape cure and all other cures have been tried a good deal at this clinic, but at present I shall only describe the results obtained by the milk cure in cirrhosis of the liver, and acute articular rheumatism. In the former affection the results have been very encouraging, and is particularly commended while the disease is in its first stage. Its prognosis is considered by many authors, especially by Thierfelder, Lebert and Frierichs, fatal, death being inevitable. Jaccoud, Kunza, Bamberger, Surre, etc., have the same opinion, while F. Niemeyer says that diagnosticating the disease in its first stage we may attempt to arrest its progress. Most writers on disease of the liver rarely or never mention the milk cure, while a good deal of space is wasted in speaking of other remedies, which daily experience has shewn to be inefficient or even hurtful. Milk in cases of cirrhosis is one of the best of remedies, and when early used has given in this clinic many curative results. It increases the urinary secretion, almost to a true polyuria, takes away the venous stasis and provokes the disappearance of the ascites and of the œdema of the inferior extremities. Moreover it is an aliment easily digested

and overcomes the globular anæmia. In this manner keeping up the general condition of the patient, the collateral circulation is developed.

Acute articular rheumatism has been subjected to a like cure. Tripier, Besnier and Biot have recognized the value of the milk diet to overcome the affection. Since 1869 Dr. Tripier, of Lyons, has used the lacteal cure as the most efficacious remedy in rheumatism, and ever since has used it with marked success. This year Dr. Biot has published in the *Revue Mensuelle de Médecine et de Chirurgie*, a long article in which he demonstrates with many practical arguments, that milk rapidly shortens the term of treatment, and in the space of three to eight days calms the rheumatic pains. Moreover, milk increases the quantity of urine and the secretions of all salines, the urates particularly. This treatment must be used only in acute articular rheumatism; the sooner the better. Salicylate of soda is used with it, and the professor thinks it opportune to use the two remedies contemporaneously. The milk with the salicylic acid will correct the effects of the disease and of the remedy, which latter are favorable to the development of globular anæmia. Tripier finds no contra-indication in the contemporaneous use of the remedies. He, however, while attributing the principal action to the milk, recognizes the salicylic acid only as an analgesic. In fact the acid, besides its sedative action on the pain, has an important influence on the fever, which is one of the principal elements of the disease; therefore it will be useful to prescribe at the same time the salycilic acid and the lacteal treatment. Wishing to use only one of the remedies, Prof. DeRenzi thinks the lacteal treatment is to be preferred by all means to the salicylic acid, when the articular rheumatism is associated with some heart affection.

A. LAGORIO, M.D.

CHIAVARI, Italy, June 1, 1880.

Domestic Correspondence.

ARTICLE X.

BOSTON LETTER.

Messrs. Editors:—At this season of the year you cannot reasonably look for medical news of such freshness as the breezes we would welcome if we could find them. Our Canadian weather prophet has been so desperately exact in his prognostications, that we have not only had the torrid "spell" he so confidently predicted, but weather of such intensity that Dante's Inferno is nothing to it. Strangely enough, however, sickness does not seem to be very rife. The wealthy have gone to the sea and the hills. The poor live out of doors, and the blessed agency of constant inhalation of pure air, the ease with which, for one horse-car fare, they can reach City Point, half way down the bay, and the charitable picnics and steamer excursions for the children, all have their influence in keeping, and even renewing, the health of these city-bound people. We have our share of sunstrokes, but the sufferers being for the most part men who are intemperate, we feel that the effect of the sun upon them is pretty generally their fault. It is rather odd that the east wind, so disagreeable in early spring and such a beneficent guest in the warmer days, has for the past three weeks, our heated term, almost literally been absent. The prevailing winds have come from the south, and our sufferings have thereby been equal to those of Charlestonians, in whose city, one day this week, the mercury ranged two or three degrees below our figures.

Last winter I quoted the charitable remarks of a member of our Suffolk District Society (not "Historical Society," as your types made me say), in relation to the proposal of the faculty of

Harvard Medical School to erect a new college building. I have remarked, by the way, that this gentleman's opinion of the faculty, all unjust and unreasonable as it was, has been quoted from my letter by Western journals without the context which should have given it its proper value. When I wrote the letter to which I refer, it was supposed that the ground occupied by our old Cochituate reservoir was the chosen site of the new building. The faculty of the school, however, have done a wiser thing. The corporation of the University has secured from the State of Massachusetts the westerly half of a square on what we term the "back-bay lands." It contains 33,000 square feet, and being much more centrally located than the present building, will be far easier of access. Moreover the new structure will stand about half way between the City and Massachusetts General hospitals. For teachers and students this will be a great advantage in the saving of time. It will also be an ornamental addition to the fine buildings, the old South Church, the Museum of Fine Arts, Trinity Church, the buildings of the Boston Society of Natural History and the Institute of Technology, which stand in close neighborhood. The Medical Library on Boylston place and the Public Library, which contains a fine collection of medical works, will also be in close proximity. Many of the students of the literary department of Harvard University from time to time attend certain of the clinics and lectures of the Medical School. So soon as the new bridge over Charles river is completed they can more quickly reach the new building than the old. It is thought that the centennial celebration of the foundation of the Medical School (1782), will occur in the new structure. It will be worthy of its surroundings and its accomodations will fully meet the needs of the constantly increasing classes which avail themselves of the advantages of this school. No professional department of the University has enjoyed a more prosperous career than has the Medical School. Hardly a medical specialty can be named that cannot be studied here. The corps of instructors has been much enlarged and the ground now covered requires so much time that the faculty have been led to announce an important change in the plan of study. The present curriculum has received several years of fair trial, and

has proved a gratifying success. But in spite of the increased amount of time given to the course, it was soon found that three full academic years were insufficient to complete the various branches of instruction. For this reason the faculty have matured a plan—the announcement of which you may have seen—a plan which covers four years, and at present is elective. Matriculates who do not choose to make use of it can adopt the old three years' course which, as yet, has not been altered in any respect. It might have been wiser on the part of the faculty if the new plan had been announced as obligatory. Such a decision would have met with warm approval and undoubtedly would have proved a success. The new plan will go into operation at the beginning of the next session. For details of the course I must refer you to the prospectus of the school. I will merely add that such students as follow the three years' plan will receive their diplomas as usual, while such as adopt the new course, complete four full years of study and obtain an average of 75 per cent. in all the examinations, will take the degree of Doctor of Medicine *cum laude*. Another refinement has been made in increased stringency of the preliminary examination. In order to be allowed to matriculate, a candidate must pass an examination in English composition and dictation, must translate easy Latin prose, have a complete knowledge of physics and show familiarity with either French, German, elments of Algebra or of plain Geometry, and Botany. These are elective branches.

When it is remembered that the new course of study is the minimum of that exacted in Europe, one cannot see why it should not be welcomed by all ambitious students. It entails self-exertion and self-discipline which will lay a solid foundation for a successful future.

It should be known that at the Harvard Medical School a student can now acquire an education which will preclude the necessity of European study. This will afford valuable advantages to men who have not the means to go abroad. There are teachers who are strong opponents of medical study in Europe. They say it is unnecessary for Americans to leave this country to obtain a professional education. In one sense this is true, for all requisite knowledge can be obtained here. But a broader

opinion would be that a year or two spent in European clinics and hospitals would give a student greater breadth of view and more liberality of thought; he widens the scope of his mind by placing himself under the teaching of men whose mental influence is far different from that of American teachers. Moreover, he sees an immense quantity of clinical material, and becomes familiar with cases which he might not meet in the more limited number of patients seen at home. He becomes familiar with one or two new languages, and likewise with certain specialties which are more thoroughly taught in the complete splitting up of medicine in Europe, than in this country. In short, he not only becomes more finely educated, but acquires a politer culture than if he went into practice directly from an American school. I have always thought, however, that a Continental course of instruction may be made much more useful in a practical sense, if the student has already had sufficient experience in practice at home to have discovered just what he especially needs. He can then make a wiser use of his time while abroad. Desultory use of clinics and hospitals is not beneficial. The student must have a plan and follow it without deviation.

The annual meeting of the Massachusetts Medical Society, held a month since, was remarkably uneventful. The Councilors' session usually develops human nature to a marked degree; but on this occasion everything was calm and placid. No questions of burning interest were brought up. The election of officers, however, was made peculiarly interesting by the fact that the next annual meeting of the society will also be its centennial anniversary. The choice of president, orator and annual chairman (who presides at the dinner), was made with direct reference to the nature of the meeting. Dr. H. W. Williams was made president, Dr. J. Collins Warren orator, and Dr. J. C. White annual chairman. The only ripple at the recent meeting was caused by a very energetic Fellow, who laid the wires for the reintroduction of the woman question next year.

You have heard of the attempt last spring to pass, through the legislature of this State, a bill regulating the practice of medicine. The bill, if it had passed, would have disposed of our horde of quacks and charlatans. It was defeated, and the genus

quack still holds undisputed sway. When the proposed law was first made known, it met with an earnestness of welcome which made it seem a success. Few would have dared wager that it would be defeated. It received the sanction of most of our leading physicians. But a minority opposed it strongly on the ground that it gave too much recognition to homœopaths and eclectics, each of whose schools were to be represented on the proposed State board of examiners. This opposition won friends so rapidly that pretty soon the bill seemed to have but few supporters. Even those who favored it, many of them, turned against it, and it failed. We are annoyed and harassed by quacks. They exist in large numbers. Of course the physicians and all well-minded citizens wish to drive them from the State. Sooner or later there will be drafted a bill which will rid us of this outrageous incubus. * *

BOSTON, July 18, 1880.

CHRONIC URETHRITIS TREATED BY INJECTIONS OF WATER SATURATED WITH TINCTURE OF IODINE.—Dr. Masurel. *Bull. Méd. du Nord.* and *Revue Médicale*, Jan. 3, 1880, p. 20.—Two injections are made the first day with an interval of 12 hours between. The next day there is but slight discharge, and a second injection may be given or not; the third day a new injection should be given and the patients are cured. Exceptionally a fourth injection has been given, but if it does not succeed something else should be tried.

POMADE FOR THE SPOTS OF PREGNANCY.—Neumann. *L'Union Médicale*, No. 59.—Chrysophonic acid, 1 gram; Lard, 40 grams; mix. The skin is cleaned with soap and water and then annointed with the ointment, a cloth being laid over to prevent it from running. Three or four applications are made, at intervals of two days, care being used to avoid the eyelids and to not use too strong an ointment for delicate skins. The regions covered become red, then black; the skin desquamates and the spot disappears.

Reviews and Book Notices.

ARTICLE XI.—A SYSTEM OF MEDICINE. Edited by J. Russell Reynolds, M.D., F.R.S., Fellow of the Royal College of Physicians of London; Fellow of the Imperial Leopold-Carolina Academy of Germany; Fellow of University College, London; Professor of the Principles and Practice of Medicine in University College; Physician to University College Hospital; Examiner in Medicine to the University of London. With numerous additions and illustrations, by Henry Hartshorne, A.M., M.D., Fellow of the College of Physicians of Philadelphia; formerly Professor of Practice of Medicine in Medical Department of Pennsylvania College, and Physician to the Episcopal Hospital of Philadelphia; lately Professor of Hygiene in the University of Pennsylvania, and Professor of Hygiene and Diseases of Children in the Woman's Medical College of Philadelphia, etc., etc. In three volumes. Philadelphia: Henry C. Lea. 1879.

This is a voluminous work, comprised in three large volumes of about eleven hundred pages each, published in the usual good style of the well-known publishing house of Henry C. Lea. It consists largely of a republication of a work that originally appeared several years since, made up of articles from a large number of eminent English writers, and edited by J. Russell Reynolds, M.D., of London, England. The present work is not a new edition of the original, revised by the several authors contributing to it, for many of those are dead; but a republication of the original text, with notes by the English editor, and still more numerous and important notes and additions by the American editor, Dr. Henry Hartshorne, of Philadelphia. It embraces

articles from no less than sixty-five contributors on as many different diseases or groups of disease. The English editor classifies diseases primarily into general and local. The first are such as involve disturbance of all the functions of the system, and the second such as are located in some structure or organ primarily, and induce general disturbance only as a secondary result.

The first volume contains an introductory article by Dr. Reynolds, and the several papers on general diseases, and also those on diseases of the nervous system. The general diseases are divided into, first, "those determined by agents operating from without;" and, second, "those determined by conditions existing within the human body." In the first division are included influenza, whooping-cough, diphtheria, scarlet fever, dengue, roseola, measles, rötheln, parotitis, sudamina and miliaria, varicella, smallpox, vaccination, glanders, hydrophobia, enteric or typhoid fever, typhus fever, relapsing fever, yellow fever, epidemic cerebro-spinal meningitis, the plague, erysipelas, pyæmia, malarial fevers, dysentery, epidemic cholera, and constitutional syphilis. In the second division are included scorbutus, purpura, chlorosis, rickets, scrofula, gout, rheumatoid arthritis, rheumatism and gonorrhœal rheumatism. Three of the diseases just mentioned—namely: rötheln or German measles, scrofula and chlorosis—have been added by the American editor. The essays on those diseases termed general, occupy the first 579 pages of the first volume of the work. The next 500 pages, completing the volume, are occupied with the consideration of affections located in the nervous system. In this part are found insanity, hypochondriasis, hysteria, ecstasy, hystero-epilepsy, catalepsy, somnambulism, sunstroke, alcoholism, vertigo, chorea, paralysis agitans, athetosis, writers' cramp, convulsions, epilepsy, muscular anæsthesia, wasting palsy, metallic tremor, simple meningitis, tubercular meningitis, chronic hydrocephalus, meningeal hæmorrhage, congestion of the brain, cerebritis, softening of the brain, adventitious products of the brain, cerebral hæmorrhage and apoplexy, abscess of the brain, spinal meningitis, myelitis, congestion, tetanus, locomotor ataxy, neuritis and neuroma, neuralgia, local paralysis from nerve disease, local spasm, torticollis, and local anæsthesia.

The second volume, containing 935 pages, is occupied with the

consideration of the diseases of the respiratory and circulatory systems of organs. Diseases of the Larynx are treated by Morrell Mackenzie, M.D.; Croup, by William Squire, L.R.P.C.; Emphysema of the Lungs, by Sir William Jenner; Asthma, by Hyde Salter, M.D., F.R.S.; Phthisis Pulmonalis, by J. Hughes Bennett, M.D., F.R.S.; Cancer of the Lungs, by Herman Beigel, M.D.; Pneumonia, Syphilitic Affections of the Lungs, and Brown Induration of the Lung, by Wilson Fox, M.D., F.R.C.P.; Cirrhosis of the Lung, by H. Charlton Bastian, M.D., F.R.S.; Apneumatosis, by George Hewitt, M.D., F.R.C.P.; Bronchitis, by Frederick T. Roberts, M.D.; Pleurodynia, Pleurisy, Hydrothorax and Pneumothorax, by Francis E. Anstie, M.D., F.R.C.P.; On the Weight and Size of the Heart, Lateral or Partial Aneurism of the Heart, and on Adventitious Products in the Heart, by Thomas B. Peacock, M.D., F.R.C.P.; On the Position and Form of the Heart and Great Vessels, Pericarditis, Adherent Pericardium, and Endocarditis, by Francis Sibson, M.D., F.R.S.; Pneumo-Pericardium and Hydro-Pericardium, by J. Warburton Begbie, M.D.; Angina Pectoris and Allied States, by Prof. Gairdner, M.D.; Carditis, Atrophy of the Heart, Hypertrophy, Dilatation, Fatty Diseases, and Fibroid Diseases of the Heart, by W. R. Gowers, M.D.; Diseases of the Valves of the Heart, by C. Hilton Fagge, M.D., F.R.C.P.; Mediastinal Tumor, Diseases of the Aorta, Aneurism of the Thoracic Aorta, Diseases of the Pulmonary Artery, and Diseases of the Coronary Arteries, by R. Douglas Powell, M.D., F.R.C.P.; Aneurism of the Abdominal Aorta, by William Murray, M.D., F.R.C.P.; Diseases of the Arteries and Veins, Cardiac Concretions, Thrombosis and Embolia, by John Syer Bristowe, M.D,, F.R.C.P.; Hæmophilia, by Henry Hartshorne, A.M., M.D.; and Inflammation of the Lymphatic Vessels, by J. Russell Reynolds, M.D., F.R.S.

The third volume comprising nearly 1000 pages, treats of the "Diseases of the Digestive, Blood-Glandular, Urinary, Reproductive, and Cutaneous systems." The contributions on Diseases of the Stomach, by Wilson Fox, M.D., F.R.S.; Diseases of the Mouth, Fauces, Pharynx, and Œsophagus, by Charles E. Squarey, M.B.; Enteralgia, Peritonitis, Diseases of the Spleen and Pancreas, by John Richard Wardell, M.D., F.R.C.P.; Enteritis, Obstruction

of the Bowels, Ulceration of the Bowels, Cancerous and other growths of the Intestines, Diseases of the Cæcum and Apendix Vermiformis, Tubercle of the Peritoneum, Carcinoma of the Peritoneum, Affections of the Abdominal Lymphatic Glands, and Ascites, by John Syer Bristowe, M.D., F.R.C.P.; Colic, Colitis, Dysentery, Fatty Liver, Cancer of the Liver, Hydatid Disease of the Liver, and Waxy Disease of the Liver, by J. Warburton Begbie, M.D., F.R.C.P.E.; Diarrhœa, Jaundice, Biliary Calculi, Chronic Atrophy of the Liver, and Acute or Yellow Atrophy of the Liver, by Edward Goodeve, M.B.; Diseases of the Rectum and Anus, by Thomas Blizard Curling, F.R.S.; Intestinal Worms, by W. H. Ransom, M.D.; Hepatalgia, by Francis Edward Anstie, M.D., F.R.C.P.; Congestion of the Liver, Suppurative Inflammation, and Gangrenous Inflammation of the Liver, by W. C. Maclean, M.D.; Splenic Leucocythæmia, Hodgkin's Disease, by William R. Gowers, M.D.; Addison's Disease, by Samuel Wilks, M.D., F.R.S.; Exophthalmic Goitre, by Hermann Beigel, M.D.; Diabetes Mellitus, and Diabetes Insipidus, by T. Lauder Brunton, M.D., F.R.S.; Nephralgia, by W. R. Basham, M.D., F.R.C.P.; Hæmaturia, Endemic Hæmaturia, Hæmatinuria and Paroxysmal Hæmatinuria, Albuminuria, Congestion of the Kidneys, Bright's Disease, Anomalies of Form, Position, and Number of the Kidneys, by William Roberts, M.D., F.R.S.; Diseases of the Renal Blood-vessels, Calculous Disease of the Kidney, Hydronephrosis, Renal Abscess, Tumors and new growths of the Kidney, and Diseases of the Urethra, by Frederick T. Roberts, M.D., F.R.C.P.; Nephritis and Pyelitis consecutive to Affections of the Lower Urinary Tract, by Marcus Beck, M.S.; Affections of the Bladder, by Sir Henry Thompson, M.B., F.R.C.S.; Changes in the Shape and Position of the Uterus, and Disorders of Uterine Functions, by Grailly Hewitt, M.D., F.R.C.P.; Inflammation of the Uterus, Metritis, Pelvic Hæmatocele, and Pelvic Cellulitis, Pelvic Peritonitis, by William Overend Priestly, M.D., F.R.C.P.; Growths in the Uterus, Inflammation of the Ovary, and Ovarian Tumors, by John Williams, M.D.; Cutaneous Diseases, by J. Balmanno Squire, M.B.; to which are added Cholera Morbus, Cholera Infantum, Trichina Spiralis, Bronchocele, Progressive Pernicious Anæmia, and Spermatorrhœa, by Henry Hartshorne, A.M., M.D.

We have given the foregoing detail of the contents of these volumes that our readers may judge more correctly of the magnitude of the work. The careful reader will note some duplications and incongruities. For instance dysentery is classed as a general disease and treated in the first volume by Dr. Meacham, and also as a local disease and treated in the third volume by Dr. J. Warburton Begbie. The same is true of roseola. Rather curiously, sudamina and miliaria are assigned a place in the first volume with the *general diseases*, and gravely treated in a short article by Dr. Sidney Ringer. Yet this writer expressly states that these eruptions "are characteristic of no particular disease, but are produced by sweating; and hence they often occur on the decline of fevers, and especially on those critical days when the sweating is most profuse." It would appear to us quite as appropriate to call the *rose* spots of typhoid fever, or any other mere *symptom*, a general disease, as to apply that title to sudamina aud miliaria. These, however, are minor matters. The greater defects in the work arise from the fact, that a large number of the articles treating of the most important topics were written some fifteen years since, and at a time when the so-called stimulating or alcoholic treatment of general fevers, and almost all acute diseases, was at its height in Great Britain; and before the antipyretic doctrines of the present day had attracted very general attention. The attempt to supply these defects by the short notes of the American editor, is only partially successful, and often seems to make the contrasts and discrepancies more prominent. For instance, the article on typhoid fever was written by Dr. John Harley, of London, in 1865, and besides being fifteen years behind the present state of medical progress, it contains a number of paragraphs much better calculated to lead the reader into serious errors, both of pathology and of therapeutics, than to aid him to correct views in regard to this important disease. Here is the first paragraph under the head of Pathology. "If we carefully regard the incipient symptoms of enteric fever, we shall find that they have reference to derangement of the hepatic function. Often, long before the graver symptoms are developed, the patient loses appetite, the bowels are constipated, and the stools pale; the tongue is foul, and the digestion much

impaired. All these symptoms point to a defective secretion of bile, and to a state of approaching inanition. Such a torpid condition of the liver may be produced in two ways in the development of enteric fever. It may result from severe or prolonged vascular congestion, in which the other internal organs participate, or it may be the effect of some morbific agent, carried by the portal vein from the intestinal surface into the liver, and causing, by a direct action upon its secreting corpuscles, derangement, or more or less complete paralysis, of its functions." (See Vol. I, p. 218). Again, he says: "Primary vascular congestion of the liver, no matter how produced, leads to a vitiation of the secretions of the alimentary canal; nervous exhaustion results from arrested nutrition. Under these conditions the liver begins to degenerate, and the intestinal mucous membrane tends to ulcerate, the blood is imperfectly depurated, and general febrile disturbance ensues." (P. 219). Still pursuing the same subject, he adds: "Not the least important function of the liver, is, to prevent by its antiseptic properties the decomposition of the chyme; take away this preservative influence altogether from the system, and fermentation with the escape of gas and tymanitic distention follow. The impure chyme irritates the debilitated and congested mucous membrane, and what wonder then if inflammation, ending in ulceration of Peyer's patches and the follicular glands, should result." Finally, he says: "From the foregoing observations it will be seen that we are induced to conclude that the disease arises from vitiation of only a portion of the venous blood, and that the constitutional symptoms are in many cases, due to consequent derangement of the hepatic function."

By these paragraphs, and still more by the whole text from which they are taken, it is seen that Dr. Harley comes as near placing the essential pathology of typhoid fever in the *liver* as Broussais did in the gastro-enteric mucous membrane, or Clutterbuck in the brain. How can he reconcile his supposed primary hepetic derangement and degeneration, and consequent decomposition of chyme as primary pathological changes, causative of both the general fever and the local intestinal lesions, with the well known fact that post mortem examinations show less morbid changes in

the duodenum and upper part of the jegunum, where the supposed chyme decomposition would take place, than in any other part of the alimentary canal; and with the further fact that the liver very generally shows much less change either in size or structure than either the spleen or the mesenteric glands. His idea, as expressed in the last pharagraph, that the mischief arises from a *vitiation* of only "a portion of the venous blood," seems to be based on the assumption that all the morbid material taken up from the intestinal surfaces and carried into the portal vein necessarily went directly into the liver. But inasmuch as a large part of the blood in the portal vein passes directly into the vena cava without entering any part of the liver, it is a little difficult to conceive by what peculiar mode of separation all the vitiating material is kept in just that part of the common mass of blood in the portal vessels that enters the branches ramifying in the liver without passing in equal proportion in that part going directly into the vena cava. It is hardly necessary to comment further on these crude and fanciful pathological notions of Dr. Harley. And yet they exert an important influence over his views of treatment, as may be seen by the following paragraph from page 247. In reference to treatment he says: "The indications in the early period of the disease are to relieve internal congestion, and to revive the function of the liver." And after this early stage is passed, he says: "In the further progress of the disease, our treatment will have almost exclusive reference to the abdominal lesion."

It is not necessary to pursue the examination of this article further to make good our assertion that its doctrines are crude and in some respects obsolete; and the same is true of many other articles in relation to some of the most important diseases the practitioner is called upon to treat. What has been pointed out, however, will indicate to our readers the nature of our objections to this great work. Yet we are not willing to let even the introductory chapter by Dr. Reynolds pass without a protest against one or two of its plausible vagaries. For instance on the first page, in discussing a definition of disease, he says: "Disease is a condition of the individual man; it is always something more than the changes that we yet can recognize and describe

in any particular organ or its functions. It is the *man* who is ill; and, under all circumstances of illness, he has a *diminished life.*" Admit that "it is the *man* who is ill," what have we gained by the admission? Can we have any conception of the *man*, whether *ill* or not, except as represented by the aggregation of his physical organs and mental faculties? Or can we form any conception of *life* in our present state of existence except as represented by the organs and structures of the body in a state of activity? Is *life* an abstract entity consisting of a given amount of something distinct from the organs or physical structures, capable of increase by health and diminution by disease? To talk about the *man* being ill, and the *illness* being always a *diminished life*, in any other sense than as indicated by the conditions of the structures and functions which unite to make the *man*, is to amuse ourselves with incomprehensible figures of speech, full of sound, but signifying nothing. But starting with such ideas of disease, we are not surprised to find him closing the same chapter with the following therapeutic law: "In all treatment, therefore, what is *general* is to be dealt with upon the basis of a true appreciation of the general pathological condition, and this in spite of all theories in regard of local changes, however they may be termed, whether they come to us with names hoary with age, or scarcely intelligible, and sometimes even ludicrous from their novelty. If the general condition be one of weakness, it matters not that the brain, the heart, or the lungs may be in a state of so-called 'inflammation', the *weakness* is the *one thing* that demands immediate treatment, and to neglect its treatment is to run the risk of sacrificing the patient to a theory of a compound state even now but imperfectly understood. This is the starting point, the essential element in therapeutics," etc. In other words we are here taught that all disease is a diminution of a life. A condition of diminished life must be one of general weakness, and this general weakness is the *one thing* demanding immediate treatment, without regard to local conditions of the brain, heart, lungs, or other structures. We can hardly conceive of a doctrine more unphilosophical than this; or one more dangerous to the patient when practically applied in the treatment of diseases. Having briefly

indicated what we deem objectionable in the volumes, with examples sufficient to indicate their nature, we wish to do justice both to our readers and the publisher by saying that these three ponderous volumes contain a vast amount of valuable information. While they are too voluminous, and contain too much matter that is obsolete, or not in harmony with the present state of medical knowledge to be fit for use as text-books for medical students, yet as works of reference in the library of the discriminating practitioner, the medical investigator, and the medical teacher, they are of real value. D.

ARTICLE XII.—LECTURES ON THE HUMAN EYE IN ITS NORMAL AND PATHOLOGICAL CONDITIONS. By Adolph Alt, M.D., Lecturer on Ophthalmology and Otology in Trinity Medical School, Canada. With ninety-five illustrations by the author. G. P. Putnam's Sons, New York.

In his preface to this work the author says: "A book treating systematically on this subject, and especially on the histological conditions of the pathological human eye, whose execution and price would allow it to be of usefulness to everyone interested in the matter, has been to this day a want often felt.

Dr. Alt is to be congratulated upon the very efficient manner in which he has supplied this want. The superior advantages for study, in this line, which the doctor has enjoyed have been well improved. This book is confined entirely to the eye-ball, and while it contains only a little more than 200 pages, it represents an immense amount of labor. The normal anatomy is concisely and clearly presented, but this we may find in a number of the text books on diseases of the eye. The chief value of the work lies in the full and special attention given to the pathological anatomy of the different structures of the globe. The numerous wood cuts from drawings by the author add very much to the value of the book, and reflect credit both upon the author and publishers.

It is very much to be regretted that this excellent little book should be marred by so many trifling errors. Comeo-scleral is comea-scleral in a number of places; protoplasmatic is protaplasmatic, lymphatic is lympathic, peripheral is periphecal, de-

pendent is dependant, serous is serious, etc. A number of sentences are not as clear as they might be. Page 8.: "The fibers into which *Bowman's* layer, is, split up and the anterior lamellæ of the corneal parenchyma together enter the subconjunctival tissue in such a way that these two parts cannot be separated," etc. Page 14.: "This is, however, always the case when infiltration results, goes in the purulent form of knatitis with partial destruction of the corneal tissue." Again, on page 203: "Some authors have seen transverse striation on these fibers, and therefore considered them to be of a character muscular cells sometimes found between them, are wandering (lymphatic) cells." But these errors do not seriously impair the value of the book, and can be elided when a second edition appears, for which we will not probably have long to wait.

In our opinion this little book is a valuable addition to the literature of the subject upon which it treats. W. T. M.

ARTICLE XIII.—ROCKY MOUNTAIN HEALTH RESORTS. An Analytical Study of High Altitudes in Relation to the Arrest of Chronic Pulmonary Disease. By Charles Denison, A.M., M.D.

The author of this book went to Colorado an invalid. He has given to the study of climate much time and careful thought prompted not only by scientific interests, but by strong personal motives. We have not yet perhaps the data on which to base positive conclusions, but from some knowledge of the Rocky Mountain regions from a somewhat extended observation of the effect of a residence in these regions upon chronic pulmonary disease, it seems quite certain that the conclusions of the author are in the main justified.

Dr. Denison sums up his study in a series of propositions. We print them in a condensed form. They have reference to consumption.

1. Cool, dry climates are desirable. These elements, coolness and dryness increase by elevation.

2. The Rocky Mountain region in coolness, dryness and sunshine meets the climatic indication.

3. The effect of dim nished atmospheric pressure from one

sixth to one-fourth of that at sea level, is to promote the activity of the blood stream through the lungs.

4. A change to the Rocky Mountain climate in chronic lung troubles is favorable in proportion as it is resorted to early.

5. The stimulating effect of high altitudes upon heart and lungs is opposed to the idea of rest, usually thought necessary to repair, but is nevertheless an important agent in arresting chronic phthisis.

6. Tissue change should be stimulated, in at least the early stages of phthisis. Altitude hastens tissue change.

7. The curative influence of the Rocky Mountain climate is best shown in the early stages of chronic inflammatory and hæmorrhagic cases.

8. The contra-indications are: 1. Organic cardiac disease, especially if accompanied with abnormal activity. 2. Softening in acute cases with extensive deposits. 3. Chronic cases with extensive cavities. High temperature and advanced age should also probably be considered as contra-indications.

9. In most cases the change from low to high altitudes should be made gradually.

10. The altitude should vary in different cases according to condition, the range being from 2000 to 6500 feet. Severe or more advanced cases do not bear as well the higher altitudes.

11. In cases which improve there should be a prolonged residence—permanent if possible.

Dr. Denison has also prepared a chart for the examination of persons contemplating climatic change. It consists of a series of questions to be answered by the patient, as well as a complete summary of the medical facts to be investigated by the physician. The volume is enriched by a carefully prepared and executed map of the Eastern slope of the Rocky Mountains, giving the elevations, rain-fall, temperature, isothermal lines, humidity, force and direction of winds, roads, railroads, mineral springs, etc.

Upon the whole, we commend the book most cordially to physicians and others interested in the health resorts of what a few years ago was the "Far West," but which is now almost as near to Chicago as the Atlantic seaboard. J.

ARTICLE XIV.—ON COCCYGODYNIA. A Lecture Delivered in the Chicago Medical College, March 20th, 1880, by Edward W. Jenks, M.D., LL.D., Prof. of Medical and Surgical Diseases of Women, and of Clinical Gynæcology in the Chicago Medical College, etc. Reprinted from the Medical Record of N. Y., Vol. XVII, No. 16; April 17th, 1880.

This is a neatly printed pamphlet of fifteen pages, in which the author presents an excellent résumé of what is known concerning the very troublesome affection named in the title, with some additions of value from his own practice. He shows that two distinct morbid conditions have been included under the names coccygodynia, coxalgia, etc. One is an inflammation either traumatic or from rheumatism in the dorso-coccygeal articulation, the other a more obscure affection either of the nerves or fibrous structures attached to the coccyx. Of the first, many cases will recover by rest and appropriate medical treatment. Of the latter, a large majority of the cases are cured by surgical interference only. The lecture will well repay a careful perusal.

TREATMENT OF GONORRHŒA BY INJECTION OF CHLORAL.—Dr. Pasqua, head physician to the military hospital of Benghazi, indicates this method of treating gonorrhœa in a letter addressed to the *Bulletin Général de Therapeutique*. He employs a solution containing a gram and a half of chloral to 120 grams of vase water. Two injections a day retained some minutes have appeared sufficient. It produces at first a slight smarting, a sensation of prickling, which is followed in two or three minutes by an agreeable sensation of coolness. After the third or fourth day of treatment, the desire to urinate and the erections become less painful and frequent, the discharge diminishes, becomes more clear and limpid and ceases completely in eight or ten days. M. Pasqua has examined his patients at various intervals without finding any of the complications or accidents which often follow badly treated cases of gonorrhœa.—*La France Médicale*, May 12, 1880.

Selections.

A Clinical Lecture upon Cutaneous Epithelioma. By I. Edmondson Atkinson, M.D., Clinical Professor of Dermatology, University of Maryland, etc., Baltimore.

Gentlemen: The patient I now show you is a widow, sixty-seven years of age, living in Baltimore county. She has informed me that about seven years ago a small spot, of pin-head size, came upon her left cheek. It was then partly scaly, and would, at times, discharge a scanty, thin fluid. Two years or more ago, a similar lesion made its appearance upon the bridge of her nose. There has been no other subjective symptom accompanying these, than a slight itching. At present the spot upon the right cheek is 1 cm. in diameter. It is of a pale-red color, not ulcerating, perfectly soft, and scaly. No scar can be detected upon it nor in its vicinity. It is itchy, and, indeed, cannot be distinguished from a patch of scaly eczema. The spot upon the bridge of her nose has gradually and steadily extended, and is now 2.5 cm. in diameter, and is quite circular. It is distributed nearly symmetrically, and its borders approximate, but do not involve the inner canthi. The surface of this area is rather darker than the surrounding skin, and is, for the most part, covered with thin, desquamating epidermis. Little ulcers have, from time to time, our patient states, appeared upon this surface, and after healing, are seen to have converted it almost wholly into a superficial scar-tissue. There is now, at the lower border, a small, brownish scab, which covers a superficial ulcer, whose base can be felt to be slightly indurated. Along the right inner margin of the patch, are arranged several granules, or pearl-like nodules, no larger than mustard seed. There are scattered about this margin

several other thin scabs and some epidermic accumulations. The affected area, taken as a whole, is very slightly infiltrated, and occasions no pain, but some itching.

Scattered irregularly over the upper part of the face are a few small spots, consisting of thin, gray and greasy-looking epidermic scales. These can be easily removed by the finger-nail; and the surface thereby exposed, is seen to be moist, sticky, with here and there a tiny drop of blood. Notice, in addition, that all the glands of the neighborhood are in a perfectly healthy condition.

Finally, the patient presents an appearance of general good health, gives a healthy history, and is not aware of any member of her family having had cancer.

Neither the appearance nor the history of this patient could impress one not acquainted with the disease, as at all alarming; and yet, we have here a form of cancer—flat, superficial carcinoma, or epithelioma of the skin.

Allow me, however, without further discussion of this case, to pass to the consideration of another form of the disease, and to read the following extracts from my notes:

Mrs. K., a German widow, sixty-four years old, of slender frame, medium height and dark complexion, came for treatment to the Special Dispensary, June 10th, 1878. Four years previously, she noticed a pimple upon the left side of her nose over the nasal bone. Slowly it became an open sore; and last fall the ulcer was destroyed with caustics. The result was successful, and the parts healed perfectly. There was no sign of re-appearance until April.

When I first saw her, there was an ulcer, situated at the margin of a bed of scar-tissue, 1.5 cm. in diameter, just below the left inner canthus, towards the median line. It was as large as a small shirt-button, and had clean, reddish edges. The part in which it was imbedded was movable about the circumference of the ulcer, but attached to the bone at its base. Along the borders, were a few medium-sized nodules. After removing a thin, dark-brown scab, the ulcer was seen to be funnel-shaped, of a reddish-brown color, moistened by a scanty, thin discharge. The edges were not everted, but were abrupt. The whole was considerably indurated. Pressure forced out a little bloody serum. The neigh-

boring lymphatics were not involved. The family history seemed to indicate no cancerous antecedents.

Recognizing this ulcer as an epitheliomatous one, on June 17th, the patient being anæsthetized, I spooned it out with the dermal curette, as thoroughly as possible, and satisfied myself that the subjacent nasal bone was extensively implicated. I next introduced a crayon of silver nitrate, and carried this wherever the morbid tissues would yield before it. The point sank through the diseased portion of the nasal bone, as through a cheesy substance, making a free opening into the nasal cavity as large as a goose-quill. The crayon was made to burrow in every direction, until only solid, unyielding tissues were encountered. The pultaceous mass was then turned out, and the wound dressed with antiseptic cotton. Recovery was rapid and complete, and when seen by me, October 10th, the integument was continuous, and the destruction of osseous tissue was only made evident by a depression. There was no sign whatever of a renewal of the new growth.

The patient whom I now present to you is the subject of the following extract from my note-book:

Mrs. G., an Irish widow, slender and wiry, had always enjoyed excellent health. Eight or nine years ago, a little wart appeared upon her right cheek, near her nose. It gave no trouble, and remained almost unnoticed. Three years ago, it began to enlarge. It has never given pain, except when she assumed a stooping posture, when it would throb. I saw her first July 15, 1879, at the Special Dispensary. She then had a tumor situated upon her right cheek—its inner border almost reaching to the nose. The superior margin of this growth was 1.5 cm. below the lower lid. The tumor was nearly circular and evenly dome-shaped, measuring, in vertical diameter, 2.5 cm.; transversely, 2 cm. It projected nearly 5 mm. above the line of the surrounding skin, from which it sprang abruptly. It was smooth, red and shining as if varnished. Its epidermis was continuous, except at five or six points where minute excoriations were present. These were covered with small, thin, brown or concave scabs. Beneath the epidermis, some red, sinuous lines (dilated blood-vessels) could be seen. The whole growth was freely movable, and did not involve the subcutaneous tissues. The skin, how-

ever, was affected in its whole thickness. At a few points of the periphery, very small scars were visible (from previous ulceration). The whole mass was slightly indurated. There was no glandular complication.

The diagnosis was here, again, cancer, but of the papillomatous variety—papillomatous epithelioma. Excision with the knife was here plainly practicable, but was positively declined by my patient, who also refused to submit to anæsthetization. Being thus obliged to forego the prospect of an immediate and speedy operation, I determined to have recourse to caustics. For reasons that I will presently explain to you, I selected the arsenical paste of Cosme as modified by Hebra. This paste is composed as follows, viz.:

℞. Acid arsenios.....(gr. x.)	0	6
Hydrarg. sulphuret. rub.....(ʒss)	2	0
Ung. aq. ros.....(ʒss)	15	0

M. S. Arsenical paste.

This paste I applied, spread upon lint, and protected by oiled silk and a compress. It was re-applied daily for four days, when the slough which had formed was dressed with a poultice. After this slough had cleared away, a granulating surface of pinkish color and of minute size was revealed. It being evident that the cancerous growth had not been completely destroyed, the paste was, in three weeks, applied as before for four days. The result of this second cauterization was most gratifying, and, as you may now observe, cicatrization is perfect. At one point, a tiny scale, not so large as a pin-head, may indicate the return of the new growth. This is very doubtful; but I have cautioned her to watch its condition narrowly.

The next case I wish to speak of presented still another—the infiltration form of carcinoma, cancer of the lip.

This patient, Patrick F., was, doubtless, known to many of you as an inmate of this hospital last summer. He was tall, slender, of feeble aspect, and 52 years old; of Irish birth. Five years ago he had a non-parasitic sycosis, which began upon his left cheek, and speedily extended to the right side of his face. He was treated for this by Dr. Michael. It is now well, but has left a smooth surface of scar-tissue in its stead.

As, however, it is not to this feature I desire to draw your attention, I pass to another point of the case. Two years ago, he first noticed a lump in his right lower lip. This gradually increased in size, and when seen by me, July 20, 1879, it had attained the dimensions of a hickory nut, involving the entire thickness of the lip, and extending far down towards the chin, including both skin and mucous membrane. It was of gristly hardness. To the eye, it appeared as if glazed or varnished, and was superficially ulcerated. The lip was everted, and a stream of saliva dribbled down to the chin. The color of this tumor was a pale pink, and its excoriated surface was coarsely granular. A thin, serous fluid bathed it. The submaxillary glands were larger than normal, but did not give an impression of specific induration. Pain was an insignificant symptom. No family history of cancer could be obtained. This patient had upon his lip the deep-seated or infiltrating form of epithelioma.

Epithelioma—epithelial cancer of the skin—comprises three forms—the two milder ones, however, tending to run into the third, more malignant one. These are—

1. The superficial or flat variety.
2. The papillomatous variety.
3. The deep-seated or infiltrating variety.

First, let us consider a few properties held by these three forms in common.

Cutaneous epithelioma is a disease of advanced life, rarely occurring before the fortieth year, more frequently after the fiftieth year. It is said to be more commonly met with in males. Of all parts of the surface liable to it, the face is, beyond all comparison, the seat of election. Next in frequency, the genital organs are attacked by it; but it is not proposed to treat in this lecture, of the disease as occurring in the latter parts. There seems to be an especial predisposition for epithelioma to attack those parts where there has been a congenital or acquired epidermic malformation, such as occurs in warts, moles, etc., or to start from spots where are those little accumulated patches of epidermic and sebaceous products, such as one frequently sees upon the integument of the aged, and such as now point out to you upon the patient before you. Still further, the new growth tends to

attack those individuals whose skins are, in their entirety, of defective congenital organization. This plaster cast, for example, represents a papillomatous epithelioma upon the arm of a man 60 years old, who had had a simple ichthyosis since infancy. Strange to say, hereditary transmission does not seem to play the same important role in this affection as in some others.

Epithelioma of the skin usually begins as a nodule of minute size, and of waxy appearance; or it may begin, as already mentioned, in flat, greasy-looking, scaly spots of minute size. (Both of these conditions may be found in the patient I first presented to you; the scaly spots being distributed over various portions of the face; the little wax-like points imbedded in and slightly projecting from the margin of the patches upon the nose.) Or, the disease may begin in a wart or a mole, which may have been of life-long duration or of recent appearance. At all events, the beginning is usually so insignificant, that for a long time it may fail to attract attention. This is more especially the case in the flat or superficial form of the disease. At other times, as in the case of F., where the cancer is of the deep-seated infiltrated variety, the new growth reveals itself first as a small tumor imbedded in the skin.

The mildest variety of cancer of the skin—the flat or superficial form—beginning as a tiny nodule, an abrasion, a scale, a small scab, may, and often does, exist for years without attracting more than passing notice. After several years, it may have developed a superficial ulcer no larger than a half-dime, with reddish, glazed, scantily-secreting base, often covered with a dark, thin crust, and slightly indurated; or, it may even be so small that ulceration will be scarcely recognizable, and yet the morbid action may have produced considerable destruction of tissue, whose place will have been usurped by a scar; for, while the ulcer may continue a small one, and always superficial, it will, in its course, have invaded a large tract—healing at one point, while invading new tissue at another.

I lately had an opportunity of seeing this form of epithelioma upon the cheek of an elderly gentleman, who had had it for a great many years. During all this time, the only active lesion had been ulceration so very superficial and limited, that it was invari-

ably covered by a little black crust, and had only attracted attention by its pertinacity. It appeared originally near the center of the cheek; but when seen by me, it was near the tragus of the ear. But it had not made this change of location without leaving its trail behind it. The tissue between the little scab and the point of origin was no longer normal tissue. It was a superficial scar, and included a space nearly as large as a silver dollar. A noteworthy circumstance was, that the little ulcer, with its scab, had not travelled continuously, but had occasionally healed entirely at one point, to re-appear at another (and this behavior is often observed in the course of epithelioma). The new growth had been slowly infiltrating the normal tissue and causing its destruction. As repair and cicatrization took place in its wake, the disease was always progressive; and yet, in all these years, the ulcer did not increase in size and activity. It is now no more formidable in appearance than at the beginning, and is still going on as it began.

When, however, as is usually the case, in the course of time, a decided ulcer is formed, it presents peculiar characters. Its surface has a dry, shining appearance as if varnished, and its color is grayish-red or brownish-red. It is also coarsely granular. The scanty sero-sanguineous discharge tends to dry into thin crusts, and there is presented a general aspect of inactivity. The form of the ulcer is irregularly circular; its edges quite clearly defined; and to the touch there is a decided feeling of induration. Scar-tissue is frequently visible in the vicinity, attesting an attempt at repair. During this period, the limits of the corium may or may not have been exceeded; frequently, the new growth will have been limited to the superficial portions of the corium; at other times, deeper tissues have been involved. In the latter event, the disease may long retain its indolent course, or it may pass rapidly into the deep-seated, infiltrating variety, and the gravity of the prognosis will be proportionately increased.

The flat, superficial form may last for years, even as many as ten, fifteen or twenty years, and remain all the time a strictly local process, never giving rise to infection of the neighboring lymphatics. Indeed, it is impossible for the new growth to become replaced by scar-tissue entirely, and the cancer to be thus per-

manently cured. This desirable result, unfortunately, is not frequently realized, and sooner or later, the superficial cancer becomes deep, and its ravages more rapid and alarming.

When this ulcerative process has become pronounced, but remains indolent, this variety of epithelioma, when upon the face, was formerly, and is still by many, especially in England, known as "rodent ulcer;" and its cancerous nature has often been denied. This view is, however, based upon the slight degree of malignity attached to this form of ulcer, and to its supposed histological peculiarities, insisted upon by many English pathologists, headed by no less an authority than Sir James Paget, who deny that the new growth is of an epithelial nature. This view, however, is now quite untenable, and it is certain that "rodent ulcer" is histologically allied to and identical with carcinoma. The clinical relations, indeed, of this form of ulcer are often so intimate with the other forms of the disease that it becomes impossible to separate them. The condition known as "rodent ulcer," therefore, is a pronounced variety of milder epithelioma, and partakes of the very moderately malignant nature of this. And since there is no longer any doubt as to its identity, it will be proper for me at this time to put you upon your guard against falling into the error of imagining differences that do not exist. Remember, then, that the so-called "rodent ulcer" is simply an ulcer of the face, of chronic course and cancerous nature.

When the ulcer assumes the characters of infiltrating epithelioma, it reveals the action by involving, not only the skin and subcutaneous cellular tissue, but also the underlying muscles and bones. To these it becomes immovably attached. This tendency, indeed, may be present from the very first. Under such circumstances, the beginning may be, as in the flat form, from a wart or fissure, etc., or it may be from a small nodule imbedded in the skin. This slowly increases in size; new nodules arise about the margins, and there is formed a smooth, indurated, slightly elevated mass. In the meantime, the new growth is reaching down its prolongations into the corium, crowding out, in great degree, the blood-vessels, the sources of its own nutrition. Just as any tissue or individual, when deprived of its ailment, dies, so do these epidermic prolongations die when their vascular food-supplying

tissues disappear before them. Thus, the dead epidermic masses, separate from those not yet sufficiently removed from the food-supply, and fall away from them. In this manner is formed the carcinomatous ulcer of whatever variety.

The infiltrating epitheliomatous ulcer now makes more rapid progress. It becomes deep, circular or oval, with hard unyielding edges, precipitous but not undermined. Its surface is granular or smooth, of a reddish or brownish varnished appearance, and discharges a small amount of ichor, which dries into a thin scab. The infiltration still stretches downwards, involving bones, muscles, whatever structures it meets, replaces them, and forms a solid unyielding mass. The boundaries of the ulcer continually enlarge, and frequently there appear nodules of waxy appearance, masses of epidermis cells—the advance guard of the main army, preparing to extend the widening surface of ulceration. The neighboring lymphatics no longer possess an immunity as in flat carcinoma; but infected with the now malignant process, become enlarged, hardened, and finally break down into ulceration, and become continuous with the original lesion, or enter upon a separate course of destruction.

Infiltrating epithelioma may destroy life in a few months When its course is less rapid, it may exist for some time, with its margin studded with nodules, or presenting a continuous border, with the waxy appearance of crumbly epidermic masses. This condition may last for a long time, but sooner or later, if not arrested by treatment, the progress of the disease will destroy life through exhaustion, mal-assimilation, pain, sleeplessness, and the accompanying train of disorders.

You will remember that I described the third case, that of Mrs G., as one of papillomatous epithelioma. There the tumor while not penetrating beyond the cutis, arose abruptly above the surrounding surface, not unlike a large button. Its slightly scarred surface was, except at a few small ulcerating points, covered with a smooth, thin epidermis. Papillomatous epithelioma may also assume the appearance presented by this very imperfect plaster cast. The patient was a woman forty-six years old, a laundress. The new growth had begun two years previously as a small pimple upon the dorsal surface of the metacarpo-phalangeal articula-

tion of the left thumb. It gradually spread until it attained the dimensions seen upon the cast (five cm. transversely by three cm. antero-posteriorly). When I first saw it the appearance was that of a huge warty growth, as seen about the periphery; but as the margin had extended, a destructive ulceration of a very insignificant aspect had been going on in the center, visible only at scattered and minute points. The central cicatrix, the result of the healing of the ulceration, formed a pale, depressed surface of the size of a quarter of a dollar, surrounded by the centrifugal papillomatous elevations. This form of epithelioma may also appear in the course of the other two varieties, and may either be superficial or deep, or the three forms may co-exist. In any case it gradually and surely assumes the characters of the infiltrating form.

The *diagnosis* of epithelioma of the skin, usually need occasion but little difficulty. Syphilis, both in its initial and later manifestations, lupus, and finally simple warty growths, may be confounded with it. An infecting chancre may present characters not to be distinguished from cancer. The history, the rapidity of development, the acute course, and the early implication of the glands in the vicinity, usually enable us to distinguish a chancre; while the subsequent course of a cancerous ulcer, cannot allow us to remain long in doubt. A tertiary manifestation of syphilis may likewise cause hesitation; but here, again, there is the history, the usual concomitant conditions, the general appearance and course of the sore, whose evolution is rapid, inflammatory, actively suppurative, and readily amenable to appropriate internal medication. Lupus may be mistaken for epithelioma. But although lupus may be encountered in elderly persons, in them it will be found to have been present since youth, for lupus is essentially a malady of early life, though it may last indefinitely; while cancer of the skin, although occasionally seen in young people, is almost invariably a malady of advanced life, and rarely occurs before the fortieth year. The ulcer of lupus is superficial, without induration, and is usually accompanied by characteristic lupus tubercles. It, moreover, is not apt to invade osseous tissue. It is not always easy to decide between the scurfy accumulations, simple warts, etc., upon the faces and other parts of elderly

people, and commencing cutaneous epithelioma. It must therefore, be a matter of the highest consequence to narrowly watch the course of such formations in the aged, especially where they first appear in advanced life; for who is able to recognize the transition stage, where benign merges into malignant new growth.

While it happens rarely that cutaneous epithelioma ends in spontaneous cicatrization and permanent recovery, it is by far the more usual experience to find it sooner or later assume all the features of malignancy and destroy life. We have seen how the superficial form often remains inactive for many years; on the other hand, life may be forfeited in a few months. But while skin cancer, if left alone, almost invariably pursues a fatal course, there can be no doubt that by appropriate interference it may be frequently arrested and permanently cured, especially in its earlier stages. It is true that one is often obliged to make more than one attempt to control the disease, and even then to encounter failure but too often. But by repeated destruction of the recurrent malady, one may fairly expect to finally triumph.

It follows that where the natural tendency of a disease is towards a fatal end, a large portion of the labor of medical and surgical minds should have been devoted to the task of devising relief from the dreaded scourge. There has resulted a multitudinous array of remedies—some worthless, others of more or less value. No disease has been attacked with a greater variety of remedies than cancer, both by internal and external application. I only desire to speak of preparations administered internally, as specifics against cancer, in order to condemn them. From time to time, the world has been startled by the discovery of a "new and certain cure for cancer," which, after a brief notoriety, has been consigned to the waste basket of experience.

Far otherwise is it with remedies locally applied; for at present there can be no doubt that epithelioma may be entirely and permanently cured by thorough removal of every particle of its structure from the tissues in which it is embedded. Unfortunately, this statement can only be made in a limited sense; for at best, it is usually necessary to practice more than one operation, and we can only hope to secure a permanent restitution to health in a portion of our cases. One reason for this is to be found

frequently in the inaccessibility of the infiltrating masses. But apart from this, where this difficulty is not encountered, the healing art often fails, and the eye of the pathologist is unable to trace the path of the insidious invader.

The therapeutic agents at our disposal, are those which, by direct mechanical or chemical action, secure the removal of the infiltration. They have the same object in view, but attain it in different ways. With the scalpel, the mass may frequently be thoroughly removed. The same result may be attained with the dermal curette, which I now show you. Finally, the use of caustics will, nowhere more than in these cases, sometimes effect marvels.

Where the tumor or ulcer is situated upon an easily accessible part, where the loss of a large quantity of healthy integument with the resulting disfiguring cicatrix is of no moment, no one will question the greater value of the knife. The same instrument is, indeed, most appropriate in operations upon exposd parts, where the cancer is small, regular and well defined. But cutaneous epithelioma occurs, in the great majority of cases, upon that part of the body where deformity is most to be dreaded, and where small scars may produce the most unsightly disfigurement, namely, the face. Unfortunately, the knife cannot select the morbid from the healthy tissues, and in order to thoroughly remove every bit of the former, large portions of the latter must often be included. Thus is frequently incurred dreadful disfigurement without commensurate advantage. It is our duty, therefore, to search out agents capable of effecting the same results with the least possible destruction of sound structure.

The dermal curette or spoon, introduced into cutaneous therapeutics by Volkmann, of Halle, enables one to spoon out thoroughly all heterologous growth, while it is with the extremest difficulty and perseverance that one can tear out normal tissue. With it the crumbling elements of the cancer can be scraped away, without injuring the healty skin. It is a most valuable instrument, as I have found by experience, but I am inclined to think that its greatest usefulness is to be found in its employment as preliminary to other agents to be presently mentioned. It is, evidently, a difficult if not impossible task, to search out with the

curette, all the elements of a cancerous infiltration tucked away in the interstices of healthy tissue; and, without doubt, one will frequently fail to effect their necessary complete removal.

Another agent of great value, is the actual cautery, employed either as the hot iron, electro-cautery, or, preferably, as the thermo-cautery of Paquelin. We have here, however, the additional disadvantage that the cautery has no choice between the tissues; and one can never know when the limits of the neoplasm have been exceeded. This objection also prevails against the use of the stronger potential caustics, such as potassa fusa, nitric acid, etc. These are, undoubtedly, unexceptionable agents for the destruction of tissue, but nothing can withstand their action. They involve all structures in a common ruin, and we are driven to employ various substances to check the destructive activity that we cannot otherwise control. Where, however, the object to be attacked is very small and circumscribed—in other words, where the epithelioma is in its earliest stages—these may be most profitably used.

It is, therefore, most fortunate that we possess other caustics whose more limited action renders them in these cases more valuable by far. As has already been remarked, with the knife and the most powerful caustics, it is often impossible to avoid far exceeding the limits of disease. This is especially the case where islets or tongues of healthy integument are enclosed by, or project into the new growth. The caustic agents I now wish to make you acquainted with, enable us, when we apply them, to destroy the morbid mass, without effecting any portion of healthy skin. By them, the cancer is dissected away with the greatest exactitude.

First of all, let me mention that mild caustic, which of late years has been almost banished from the class of escharotics—lunar caustic, silver nitrate. This agent may be appropriately fixed in a porte-caustique, or better still, in a goose quill, and its point driven into the morbid mass. It will, with gentle pressure, sink down until the healthy tissue is encountered. The point is now ploughed in all directions, wherever it will go—the epitheliomatous tissue melting away before it. When all of this has been destroyed, the point will be found to encounter unyielding re-

sistance in every direction, and the operation is finished. If cicatrization be not complete at the end of a month, the process may be repeated. It will often be found advantageous to use silver nitrate after the dermal curette has removed all the grosser parts—a method I am about to put into practice upon the patient now before you.

It will frequently happen that a patient will not consent to submit to the necessary anæsthetization, or will refuse to submit to any operative procedure whatever. We still possess remedies that will effect our object in a slower manner. Arsenic may be used here in preference to other remedies. Mixed with an equal part of gum arabic, it may be applied, as Marsden's paste, and allowed to remain undisturbed for two hours or so. The resulting slough should be poulticed. I have, however, no experience with this procedure, and will not speak further of it.

I have had every reason to be gratified with the use of Cosme's arsenical paste as modified by Hebra, the composition of which I have already described. The method of its application, as recommended by that most distinguished dermatologist, and always observed by myself may be briefly described.

It having been decided to use this method (and in cases of moderate extent and intensity, it is most suitable), the surface of the epithelioma should be carefully cleansed. The paste, spread upon a piece of sheet lint to the thickness of a knife-blade, and corresponding to the surface of the new growth, should then be applied. A piece of oiled silk should be placed upon this, and over all a compress, held in position by adhesive strips. By the following day the patient will have begun to experience throbbing and some darting pain in the part, and upon removing the applications, the surface will be found to be swollen and reddened for some distance beyond the margins of the disease. After careful washing, the paste should be applied as before. Before the next dressing, which should be upon the following day, pain will have become very severe. By the end of the third day, or perhaps not until the fourth day, the parts will have become greatly swollen and reddened, and the surface of the epithelioma will be of a dark brown, charred appearance. The pain, which for the latter twenty-four or thirty-six hours will have been very severe, should

be controlled by opiates. The redness and swelling need occasion no apprehension, since in a few hours after the removal of the caustic, they will disappear. A poultice should be applied until the slough begins to separate, which will be in a few days. At the expiration of a few weeks, this procedure may be repeated if any tendency to a recurrence of the disease be observed.

I have employed this treatment frequently, and have every reason to be satisfied with it. Its disadvantages are the protracted pain and the length of time required. The first we can control with anodynes; the second will often be preferred by the patient to the use of anæsthetics and the more speedy operation. The result is, in suitable cases, always equal, sometimes superior to that attained by the scalpel. The risk of arsenical poisoning is, here, practically *nil.*

Pyrogallic acid, in the form of a ten per cent. ointment, with vaseline or lard, has lately been recommended by Kaposi and others in the treatment of epithelioma, as a caustic agent; but, although I have used it, I am unable to give a decided opinion of its merits.

In conclusion, let me remind you that there are limits to our usefulness in this disease. Where there exists very great and wide-spread cancerous infiltration, or where the glands in the vicinity have become infected, we can rarely stay the progressive and destructive process. The enemy is a strenuous one, at best, and often defies our efforts. With the knife, the dermal curette, the actual and potential caustics, much may be accomplished in prolonging life, and in permanently overcoming the disease. But let it not be forgotten that the most good can be done when the disease is attacked early, vehemently, persistently.

A time will, nevertheless, often arrive, nay, may have already arrived when you are first consulted, when you may no longer hope to check the malignant advance. While powerless to cure the disease, or even to prolong life, in such cases, you may at least lend a supporting hand, and guide the failing footsteps along easy pathways, down into the dark valley.—*Virginia Medical Monthly.*

REPORT OF THE COMMITTEE. Appointed by the American Medical College Association to Consider and Recommend a Plan of Registration of Medical Colleges in this Country. Read May 31, 1880.

At the annual meeting of this Association, held in Buffalo, N. Y., June, 1878, a communication was received from a foreign source asking for a list of American medical colleges in good standing, the degrees from which should be recognized by the medical institutions of other countries. Questions of a similar character had been asked many times before, both at home and abroad.

Owing to the number and varied character of the medical schools in this country, there was some difficulty or embarrassment in returning a proper answer; and after some discussion a committee of three was appointed to consider and recommend a *plan* for the registration of American medical colleges.

A report of considerable length was prepared and submitted to the regular meeting of the Association in Atlanta, Georgia, May, 1879. Some of the more important recommendations appended to that report were adopted, but the report, aside from such recommendations, was re-committed or referred back to the same committee with instructions to revise and condense the same and report it to the next annual meeting. In accordance with these instructions the report has been carefully revised, or, more properly, re-written, and is now respectfully presented by the undersigned as follows:

In devising a plan for the registration of medical colleges, which shall designate those whose diplomas should be recognized or respected at home and abroad, the question immediately arises, What shall be the standard by which such institutions shall be judged? In considering what constitutes a proper standard for a college, we must determine: First, What constitutes a proper or adequate medical education? Second, What is the minimum length of time required for a fair acquisition of such an education? Third, What part of such time should be spent in direct atten-

dance on a medical college? and Fourth, What are the appliances, means of illustration, and facilities for imparting practical knowledge, that are necessary to constitute a college capable of performing all the functions required of such an institution?

The first of these questions may be answered by saying that an adequate medical education is such as gives to the student a fair practical knowledge of all branches of medical science, and a mental discipline sufficient for the proper use of such knowledge in the practice of the medical art. We use the words "practical knowledge" as implying something more than mere verbal knowledge. For instance, a student might study a text-book on human anatomy until he could describe every bone in the skeleton, state the origin and insertion of every muscle, and give the distribution of the blood-vessels and nerves, and thereby sustain a fair verbal examination in that department. Yet, if he had never either dissected a subject himself, or witnessed the actual demonstration of each part by a competent teacher, he would be entirely devoid of that *practical* knowledge necessary to guide him in the operations of surgery. The same is true of most of the branches of medical science. Therefore, a practical knowledge of these various branches necessitates demonstrative teaching and personal manipulation, which can be provided in an adequate degree in medical colleges only. The amount of medical knowledge requiring for its proper acquisition this kind of teaching, makes it necessary that at least one-half of the whole time allotted as the period of medical pupilage should be spent in the medical college.

As there are none at the present time who seriously claim that less than *three* full years should be devoted to a diligent study of medicine, before graduation or commencement of practice, we may answer the second and third questions by stating that the minimum length of time required for gaining an adequate knowledge of medicine should be not less than three years; and that at least one-half of each of these years should be spent in a proper medical college. And this makes it necessary that the medical colleges, to be capable of performing their functions properly, should extend their annual term of active and obligatory instruction to six months of each year. It is obvious, also, that in answering the fourth question, we must insist that the very objects

for which medical colleges are needed make it necessary that each one should not only provide a full curriculum of studies, a full corps of teachers, and an annual term of six month's instruction, but also a sufficient supply of anatomical material for demonstrations and practical dissections; a chemical apparatus and laboratory for practical or analytical chemical work; a histological and physiological laboratory for practical and microscopic work; a museum containing a collection of specimens of normal and pathological anatomy sufficient for illustrating the departments of pathology, practical medicine and surgery; and access for the students to a hospital containing a daily average of not less than thirty patients actually in the wards for treatment and accessible for clinical instruction. A college which is so organized, or so located, that it does not or cannot provide for the daily use of its students all the resources here named, both for didactic and practical instruction, is not capable of performing all the functions that should be performed by every such institution that receives the patronage of the profession and the public. So long as the medical college diploma is recognized as a sufficient license to practice, every college asking for recognition should be required, in addition to possessing the foregoing means for adequate instruction in all departments, to exact proper evidence from every student that he possesses at least a good English education before allowing him to become a matriculate of the college; and after matriculation he should be required to attend *three* regular annual terms of medical college instruction of not less than six months each, and the last of which should be in the institution granting him a diploma.

Such are the views of your committee in regard to the *standard*, to which all medical colleges should be required to attain, before their diplomas should be regarded worthy of universal recognition.

And if this College Association should adopt and enforce two amendments to its articles of confederation proposed at the last annual meeting, and now lying on the table awaiting final action at this meeting, it would speedily bring a large majority of the colleges located within reach of hospitals accessible for adequate clinical instruction directly up to the standard proposed. One of these amendments provides for the enforcement of a proper stan-

dard of preliminary education before admitting the student into the college, and the other for demanding attendance on *three* regular annual courses of medical college instruction before graduation. It is greatly to be desired that both these amendments shall be adopted unanimously by this Association at its present session. Until such action is taken, however, your committee have no alternative but to adopt the standard presented by the present articles of confederation of this Association as a basis or guide for the registration of American medical colleges. By a careful examination of the annual announcements of the colleges of legitimate medicine in the United States for 1879-80, we find about three-fourths of the whole number complying fully with all the requirements for membership in this Association. We find several of the remaining ones complying with all the regulations in regard to time, means, and amount of instruction furnished and qualifications required of the student, but failing in some particulars in relation to the exaction of *fees* for instruction. And a few come short more or less, either in the amount of instruction furnished, or in the time of attendance required, or both. Some of these serious shortcomings are in institutions where we should least suspect their existence. For instance, in the Medical School of Harvard, at Boston, there is certainly nothing in their annual catalogues to hinder a student from receiving the degree of M. D. from that institution by an attendance on simply one college year, which means merely nine months. The language of their catalogue for 1879–80, touching this point is, under the head of *Division of Studies*, as follows: "Students may be admitted to advanced standing in the regular course; but all who apply for admission into the second or third class must pass an examination at the beginning of the year in the branches already pursued by the class to which they seek admission, and furnish a satisfactory certificate of *time* spent in medical studies." Again, under the head of *Requirements for a Degree*, we were told that "Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine three full years; have spent at least one continuous year at this school; have presented a satisfactory thesis; and have passed the required examinations."

In turning to the examinations required in each year, we find those of the first year to be Anatomy, Physiology, and General Chemistry. Those for the second year, Medical Chemistry, Materia Medica, and Pathological Anatomy. Now, it strikes us that he must be rather a dull young man who cannot take the necessary books, get some regular practitioner to lend the use of his name as a preceptor, and in two years make himself sufficiently familiar with the language of his text-books, that he can pass a fair examination, either oral or written, in Anatomy, Physiology, and General Chemistry, in connection with at least two out of the following three: Medical Chemistry, Materia Medica, and Pathological Anatomy. And if he can do this he can step directly into the third or graduating class, and complete his course by attending *one* college year, without ever having set foot inside of any other medical school. We are sorry to perceive that in regard to permitting students to take advanced standing in such a way as make the degree accessible by attendance on only one collegiate year of medical instruction, the example of Harvard has been followed by the Medical Department of Yale, and possibly some others. If we have not misinterpreted the catalogues, the very school which has made more pretentious appeals for the sympathy and support of the whole profession, on account of the great advancements she is making in elevating the standard of medical education in this country, is to-day offering her diploma for a less amount of medical college attendance and instruction than any other respectable school in this country.

Indeed, in reviewing the annual catalogues and announcements of the medical colleges generally, nothing has struck us so forcibly as the vast amount of medical instruction provided by these institutions, and to all of which the students are most cordially invited, to some part of it without money and without price; compared with the very modest amount they are actually required to take.

The almost stereotyped flourish is something like the following: "The preliminary course of lectures in this institution will commence on the 15th of September and continue until the opening of the regular college term. Three lectures per day will be given on very important topics, by members of the college faculty, besides the usual clinics in the hospitals and dispensaries. This

course is free to all students. The regular winter term commences on the first Monday in October, and continues until the last Tuesday in February, when the public commencement exercises will be held and degrees conferred upon the members of the graduating class. The regular spring and summer course of instruction will commence on the first Monday in March, and continue three months. This is a very important course for the student to attend, as many topics of great importance will be taught for the consideration of which there was not sufficient time in the regular winter term. "This course is often free to all regular matriculates of the college, at other times a fee of $20, $30 or $50 is charged, the same to be credited on the fees of the next winter term." It is thus seen that instruction in this institution continues through nine months of the year. But attendance on the regular winter term *only* is *obligatory* upon the student, that on the spring course being entirely optional and not counting as a course in the requirements for graduation." This is a very moderate representation, of the general average of pretention. Nine months of instruction, all of which is alleged to be very important, and yet only five months, or just a trifle more than one-half of the whole, is the student actually required to pay any attention to. Again, look at the self-stultification presented in the claim that all the instruction provided is important and much of it on topics that could not be included in the regular winter term for want of time. If this claim is true, common sense would dictate either the extension of the winter term or the making of attendance on the spring term obligatory.

Still another phase of these shams consists in cutting up the general departments of medicine, surgery and obstetrics, by carving out of them something less than a dozen *specialties* with a lecturer or full professor in each one. This swells the list of members of the faculty and instructors to formidable proportions, and helps to back up the general claim of great advancement in the facilities for instruction. But when we turn to the time allotted to each of these additional teachers in which to give their highly important amount of instruction, we find the length of the term *obligatory* upon the student substantially the same as

before, and the number of hours daily devoted to instruction also the same.

Nothing is more plain, therefore, than the fact that all this array of special additional teaching either takes the place of a similar amount of teaching under the general heads, or is crowded into the terms, attendance on which is entirely optional, namely, the preliminary course and the spring and summer terms—the preface and the supplement; or, to express the actual facts more exactly, these additional special branches come in to occupy a part of the time of the regular obligatory college term, and by shortening just so much the time allotted in said term to the general branches, a corresponding amount of instruction in these goes over to help make up the purely voluntary spring and summer course, when, as a general rule, three-fourths of the students have returned to their homes or their preceptor's offices. To cap the climax in this complicated effort to show a great advance, and yet, so far as real exactions upon the students are concerned, stand quite still, many of the colleges do not even require the students to be examined in any but the seven main branches of medicine, viz.: anatomy, physology, chemistry, materia medica, practical medicine, surgery and obstetrics. It does not require a very rigid annalysis of the facts here alluded to, or many years of practical experience in connection with medical colleges, to see very clearly that all this array of optional medical instruction has served to diminish the completeness and harmony, without increasing the amount of the real medical knowledge communicated to the great body of young men attending the colleges. For no fact is better known to the members of this Association than that three-fourths of the whole number of young men who study medicine actually *attend only* just so much medical college instruction as is made obligatory upon them for the attainment of a diploma. Consequently, the college that has during its obligatory winter term of five months, or twenty weeks, 150 students, will find from 25 to 40 remaining to enter upon the voluntary spring term commencing early in March. By the end of April, half of these have disappeared, one by one; and by the end of the term it will be doing well if a baker's dozen be present at the closing lecture. If the college be in one of the great commercial

cities and has a class of 400 or 500 students attending its obligatory term, 100 to 150 may enter their names for attendance on the voluntary spring term, but as the term progresses, the same dwindling takes place as in the other case. With some the pocket money gets low; with others, it is becoming too warm; still others find they are needed at home to aid their preceptors or somebody else; and the faculty of instructors have cause for special congratulation if they have from 50 to 75 actually in the lecture rooms at the close of the term. Now how much better it would be for all parties concerned if the regular obligatory term was extended to six months, whereby one month more of systematic instruction in all departments were given to the whole 400 or 500 students. instead of two months additional voluntary instruction to a number ranging from 50 to 150. The effects here seen in one college apply equally to all the colleges and to the whole mass of medical students. The present state of things has grown out of the efforts of the colleges to yield to the constantly increasing demands of the profession and of the people for a higher standard of attainment on the part of medical men. Knowing that the controlling motive of the student is to obtain the college diploma with as little expenditure of time and money as possible, and influenced, whether consciously or not, by strong feelings of mutual jealousy and active rivalry, every device has been resorted to for increasing the show of instruction and advancement without increasing materially the obligatory demands upon the time and attainments of the student before he gets his degree.

Hence it is that we are in the midst of an era of an enormous show of medical instruction, as represented in the college announcements, a trifle more than half of which the students are obliged to attend, while the other half goes mainly to empty benches. The latest addition to this side-show business is the notice sent out by the faculty of Harvard, for which she is now receiving a fresh supply of gratuitous advertising in the medical journals, stating that hereafter she will add a fourth year of medical instruction to her already extended system. True the notice states that it will be mainly a continuation of the studies of the third year, and that attendance upon it will be entirely optional with the student. But if the latter does graciously

condescend to attend this fourth year before he graduates, he is permitted to have added to his title of Doctor of Medicine, those remarkable words, "*cum laude*." We had always supposed that any student who desired had the privilege of adding a fourth, fifth or even sixth year to his medical studies in any medical college in the country. At any rate we have known several rather dull young men who were obliged to attend a fourth year, and one even the fifth year before obtaining a degree. But this era of make-shifts and pretentions, of more show than substance, of superabundant provision for instruction without requiring the student to attend more than half of it, must soon come to an end. It is in the nature of things only a transition period. This College Association must perpetuate its existence, and move steadily on to the perfection of its work by adopting the pending amendments in relation to preliminary education and the exaction of attendance upon three annual courses of college instruction before graduation; and in all other important particulars combining and harmonizing the colleges, and perfecting the details of a fair and honorable system of medical education; or, failing in this, the profession and the people will unite on such legislation as will establish independent boards of examiners in every State, and take the matter of licensing candidates to practice medicine entirely out of the hands of the colleges, thereby leaving them to to compete with each other solely as institutions for imparting instruction.

Already the drift of popular demand is plainly in the latter direction. In making this report, we have omitted a detailed list of colleges that comply with the requirments of this Associations, as well as of those that do not comply, simply because that special duty was, at the last meeting, assigned to a regular standing committee, and we thought a duplication of the same work unnecessary. Respectfully submitted,

N. S. DAVIS,
S. D. GROSS.

On the "Summer Complaint" of Infants. A Clinical Lecture. By J. Lewis Smith, M.D., Clinical Professor of Diseases of Children in the Bellevue Hospital Medical College, New York.

Gentlemen: The hot weather is now approaching, during which the most prevalent and fatal disease of the cities is the so-called "summer complaint" of infants. It is espcially fatal in the large cities of the Atlantic coast. It is an intestinal catarrh, which begins to appear in the middle and latter part of May, and becomes more and more frequent, reaching its maximum prevalence and severity in mid-summer, after which new cases are less and less frequent till the last of October, when the epidemic gradually disappears, and no cases remain except such as have lingered from the hot months.

The "summer complaint" is, anatomically, a catarrh of the lower part of the small intestine, and of the entire large intestine: the inflammatory lesions being, in fatal cases, most marked in the descending portion of the colon, and especially in the sigmoid flexure, where the excrementitious matter is most apt to be delayed and to accumulate. The greater thickening and redness of the mucous membrane in this locality, which I have often observed at autopsies, has seemed to me chiefly due to the irritating nature of the fecal matter, just as the erythematous redness of the skin around the anus present in certain cases, arises from this cause. The ulcerations which are apt to occur in grave protracted cases, and which are circular and seem to correspond in site with the solitary glands, are also most numerous in the descending colon, and particularly in the sigmoid flexure. Most cases of this disease occur prior to the age of two and a half years; so that the "summer complaint" is almost peculiar to infancy. But the first years of childhood are not entirely exempt.

There are two important factors in the causation of the "summer complaint:" 1st. The atmospheric heat, which acts as a causative agent, not so much by its direct effect on the system—

though its direct enervating influence may act to a certain extent, as a cause, by impairing the general tone of the system, and the digestive function in particular—as by producing foul gaseous exhalations from the decaying organic matter, which always exists in considerable quantity in and around the crowded domiciles of the poor in our cities. Abundant observations show that the "summer complaint" is most frequent and fatal in those localities, where the streets, court-yards and apartments are most filthy. In these places the foul odors are often very perceptible to the visitor. The operation of this cause seems to me to be similar to the foul air of the dissecting-room, in former times, when the medical student remaining long at dissection was apt to be incommoded by attacks of diarrhœa.

2d. The other cause is not less important, and in a large proportion of cases its action is apparent. It is the use of unsuitable food. For food which the feeble digestion of the infant cannot assimilate, soon begins to undergo fermentive changes, and acts as an irritant and purgative. It is the common opinion among families that the "summer complaint" is most frequent and dangerous in the second summer, but many observations establish the fact, that the first summer possesses no immunity, but on the other hand, the younger the infant, the greater the liability to be attacked if the diet is improper, and the reasons why so many infants remain well in the first summer is that they are nourished at the breast, and this second factor or cause is not operative in them.

It is not my intention at this time to speak at length of measures designed to prevent the "summer complaint," or of the hygienic measures required in its treatment except to state certain facts, which are very important, and the knowledge of which will materially assist the physician who has had little experience with the disease. First, every infant under the age of twelve months in the city should, if possible, have the breast milk during the hot season. If the mother be not competent to furnish it, a wet-nurse should be employed. If it cannot have the breast milk, the family should be urged to go to the country, especially during July and August. Never consent to the weaning of an infant in or just before the hot weather. Statistics which I have

preserved, bearing on this point, show a most disastrous consequence. The new diet will not agree, and if weaning be necessary, insist on removal to the country.

But there is a large number of infants in the families of the city poor that are weaned at this improper time, no physician having been consulted, and a large number also who are wet-nursed, but the breast-milk is insufficient, and it is necessary to employ more or less artificial food. Now it is very important to decide what kind of food should be given. The shops contain several so-called "substitutes" for breast milk, but the milk of the cow or goat more closely resembles human milk, than do any of these "substitutes," and when sufficiently fresh, and of good quality, it is to be preferred, I think, for most infants. For an infant under the age of two months it should be diluted with one-third its quantity of water; for those between the ages of two and five months, one-fourth or one-fifth its quantity of water should be added; while for those over the age of five months, no dilution is ordinarily required. The infant after the age of one month should not take the breast more frequently than every second hour, and for artificial feeding it is well to have a little longer interval.

The casein of cow's or goat's milk is apt to coagulate in the stomach of the young infant in large masses, which are with difficulty digested. To aid, in a measure, in preventing this a thin farinaceous food, as barley-water, or rice-water well boiled, may be mixed with the milk. The farinaceous particles intimately mixed with the casein tend mechanically to prevent the coagulation in large masses. In an infant now under observation in the New York Infant Asylum, cow's milk given in the ordinary way caused vomiting, but, by preparing from it a wine whey, with a small proportion of sherry wine by which a considerable part of the casein is removed, it is no longer troubled with indigestion and is doing well. The employment of fresh wine whey, thus prepared, will often be found useful, at least as a temporary expedient, when the infant vomits milk prepared in the ordinary manner, and containing the full amount of casein. It has been proposed by Drs. Rudisch and Jacobi of this city to coagulate the casein, or at least a part of it, by hydrochloric acid

before the milk is used. A half teaspoonful of the dilute officinal acid is added to one pint of cold water, and this is thoroughly mixed with two pints of cold milk, and the mixture is then boiled ten or fifteen minutes. This has been employed for only one infant under my observation, in one of the institutions. It had vomited the cow's milk previously given, and it vomited this as well. I design, however, to give the acidulated milk a more extended trial in the approaching hot season.

Another way of getting rid of a considerable part of the casein, which I have for many years employed, is to allow the milk, as soon as received, to stand for two or three hours, when the casein, from its greater specific gravity, has a tendency to fall, and the cream to rise. The upper portion can then be removed for use. If, as I think is ordinarily the case, this gives too much butter, the superficial layer of cream can be separated and rejected.

Still, there are many infants during the summer months, with whom cow's milk prepared in the usual way does not agree, and will not be likely to agree, however prepared, and condensed milk is found to do no better. For such, a thin gruel made from barley, rice, or wheat flour (the last having by preference been boiled in a dry state, several hours in a bag, and then grated) should be mixed with the milk in equal quantity, or the gruel may be in excess. By such aids we do the best we can to assist the feeble digestive function of the infant, but nothing which we can prepare will take the place of human milk for those under the age of twelve months. Of the various kinds of infant's food found in the shops, Ridge's food, prepared with milk, and Nestle's lacteous farina, prepared with water, have been favorably received, and many infants do well upon them except in the hottest weather. The medical profession will always regard with kindly feelings, the earnest endeavor of the renowned chemist, Baron Liebig, in the last years of his life to prepare a substitute for human milk, so important did he consider the subject of infant diet. Physiology at that time taught that young infants could digest only a very small quantity of starch, since in the first months of life the amount of salivary secretion by which starch is converted into glucose, a necessary change in digestion, is inconsiderable. But now it is ascertained that there is an epithe-

lial ferment, which effects this change as well as the saliva. As Prof. Flint, Jr., says " * * * the intestinal juice of itself is capable of effecting the transformation of starch into sugar to a considerable extent," and an epithelial ferment in the buccal cavity appears to act in the same way (Richet). Therefore it seems that the youngest infant can digest a moderate amount of starch, though farinaceous substances are not to be depended on as a chief article of diet for any infant under the age of four or five months.

But the theory that starchy food could not be digested, or is digested slowly and insufficiently by such infants led Liebig to the preparation of his food, in which starch is converted into glucose by the action of malt. Now I have used quite extentensively the three preparations of Liebig's food contained in the shops, namely Hawley's, Horlich's, and Mellin's, and although they do well, answering the purpose for which they were designed, in the spring, autumnal, and winter months, I have discarded their use—in the summer season. If employed, except in small quantity, they certainly produce a laxative effect, from the large quantity of grape sugar which they c.ntain, during those months when there is special liability to diarrhœal attacks. With these preliminary remarks, I wish to speak more particularly of the medicinal treatment of summer complaint.

While it is very important that this disease should receive early treatment, unfortunately many cases are allowed to run on for days even weeks before the physician is called. This neglect I find to be due in many instances to the belief common in the community, that a relaxed state of the bowels renders dentition less dangerous and is a relief to it, so that the infant may have half a dozen alvine discharges each day, and the parents believe that they are salutary, till finally they are alarmed by the evident loss of flesh and strength.

As in many other maladies, the medical treatment has materially changed within the last few years. Calomel, formerly administered in small doses in belief that the function of the liver needed rectifying,—this belief arising from the fact that the stools are green in many cases,—has been discarded. The green color is now known to be produced in the intestines at a considerable

distance below the point where the bile enters it, and to be the result apparently of the admixture of the intestinal secretions with the fecal matter, just as the stools sometimes have the normal color when evacuated and become green from the action of the urine. The old dread of administering opiates to infants, promoted in this country by the perusal of Beck's "Infant Therapeutics," has ceased, in consequence of accumulated observations, showing their good effects, and the little risk which attends their judicious employment. The vegetable astringents, such as kino, catechu, and tannin, are now little used; another agent which is more readily administered, less likely to cause nausea and more effectual, taking their place.

Occasionally it is proper to commence treatment by the administration of a gentle purgative, as a single dose of castor oil, or a mixture of syrup of rhubarb and castor oil, when there is reason to think that the diarrhœa has been excited or aggravated by some irritating substance which the infant has swallowed, and which should be expelled before measures to restrain the stools are employed; but ordinarily no such preliminary treament is required, as the diarrhœa has contiued so long when the physician is called that any fruits or other substances injudiciously given must already have been expelled, or the history of the case shows that no such substance has been taken.

Our main reliance must be on opium and bismuth subnitrate, for the purpose of checking the stools and arresting the catarrh, and, as fermentative changes in the milk usually cause an excess of acids in the intestines, on some alkali, as the preparations of chalk. Opium is useful in checking the intestinal catarrh of infants as it is in that of adults, but I seldom give it or other medicine in the form of powder, experience having taught me that powders are apt to be partly wasted.

For infants under the age of five months opium may be safely and conveniently administered in paregoric, in doses of three drops to an infant of one month, five drops to one of three months, and eight drops to one of five months. For an infant of six months the deodorized tincture of opium should be given in half-drop doses, and for one of twelve months in drop doses. The interval between doses should be about three hours. Opium

should never be prescribed in those advanced or grave cases in which there is marked drowsiness, or rolling of the head due to incipient spurious hydrocephalus. Refraining from its use for such patients, and giving it in the doses and with the interval stated above, I have almost never had occasion to regret its employment, though prescribing it several times each day during the hot weather, in private and asylum practice. Drops are of very variable size when falling from the mouth of a bottle, and the dropper should always be employed, so that the drop may be as nearly as possible half a minim. The metric system insures more exactness, but we are not yet ready for it in this country. In certain severe cases the opiate may be given for a time every two hours.

The bismuth subnitrate is applicable to all cases, possessing no disadvantanges, and producing no ill effects to limit its use. It may be given safely and with advantage in all stages of the malady as long as there is vomiting or diarrhœa. It is an efficient anti-emetic and antiseptic. It seems to act mainly locally, restraining the stools, increasing their consistence, and producing a soothing and curative effect upon the inflamed surface. It probably retards fermentative changes. It becomes a bismuth sulphide as dark as charcoal in the stomach, as I have observed at autopsies, and if taken in large doses, as it should be, it renders the stools dark. It sometimes taints the breath like that from onions or garlic, but I am informed that this is probably due to some impurity. It has long been in use in practice, but in insufficient and inadequate doses, for infants, until within recent years. An infant of one year should take it in doses of ten or twelve grains, and one of six months in six or eight grains.

Although we do not wish to produce alkalinity within the stomach, as the pepsin in its normal state is acid, and necessarily so for healthy digestion, yet in the "summer complaint" there is an undue development of acids, probably mainly the lactic. Therefore akalies, as lime-water and the preparations of chalk, have long been used in this disease, and with apparent benefit, especially in the more acute cases. Alcohol, in moderate quantity, aids digestion, and is a heart stimulant. It is quickly eliminated from the system of the infant, and should be given at

intervals of one to two hours to those who require it. It is given best in the form of Bourbon whisky, brandy, or sherry, port, or Madeira wine. It is urgently demanded when, from failing heart action, hypostatic congestion of the lungs or brain is occurring or impending. In spurious hydrocephalus, which complicates many severe and protracted cases, its timely use aids materially in averting the danger. Many years ago Dr. Gooch, of London, was in the habit of employing in such cases of failing heart action the aromatic spirits of ammonia, and in five-drop doses sufficiently diluted in water it is a good stimulant and antacid.

Mild cases do not require special treatment designed to reduce temperature, as it is but moderately elevated. If the heat of the head be moderately increased, a cloth wrung out of cold water should be constantly applied to it, and especially should the nurse be forbidden to cover the head except in the slightest and coolest manner, either in the house or out-door. In those severe cases known as choleriform diarrhœa, or cholera infantum, more energetic anti-pyretic local treatment is required. This form of intestinal catarrh, which usually occurs quite abruptly, having been preceded either by a state of health, or mild diarrhœa, and is characterized by frequent watery stools and rapid loss of flesh and strength, is attended by a temperature unusually high, namely from 104° to 106°, or even higher. Such great elevation of temperature involves danger, and the prompt use of measures designed to reduce it constitutes an important part of the treatment. A bladder containing ice may be applied to the scalp, separated from it by one or two thicknesses of muslin, and the excessive heat of the hands and arms may be reduced by frequent sponging with cool water, and clysters of iced starch-water or mucilage are proper.

To these general observations in reference to the selection and use of therapeutic agents, it may be useful to the young practitioner to add certain formulæ, which, or the equivalents of which, experience has shown to be useful. To control the diarrhœa the following should be prescribed for an infant of one year: ℞. Tinct. opii deodorat. gtt. xvj; bismuth subnitrat. ʒij; syr. simplic. ʒss; mistur. cretæ, ʒiss. Misce. Shake bottle and give one tea-

spoonful every three hours. An infant of six months can take half the dose. A powder of bismuth, with the compound powder of chalk and opium, or with Dover's powder, has a similar effect.

Vomiting is often a very troublesome symptom, but the bismuth in the above prescription not unfrequently checks it. Its cause is probably not always the same. It is sometimes relieved by lime-water and brandy in milk when due to an excess of acid in the stomach, but the following prescription has given me more satisfaction than any other: ℞. Vini ipecacuanhæ, gtt. ij; bismuth subnitrat, ʒij; syr. zingiberis, aq. menth. peperitæ, āā ʒj. Misce. Shake the bottle and give one teaspoonful whenever there is nausea.

Whenever there are tenesmus or streaks of blood in the stools, and in other cases which are exceptionally obstinate, the following will be found useful as a clyster; ℞. Argent. nitratis, gr. j; bismuth subnitratis, ʒss; mucil. acaciæ, aquæ, āā ʒij. Misce. The whole of it or a part may be given through a glass or gutta-percha syringe, and retained for half an hour or one hour by a compress. Towards the close of the hot weather and in fall months, we are often asked to examine and treat protracted cases, that have been gradually losing flesh and strength since the diarrhœa began several weeks previously. The febrile movement is usually moderate, the appetite poor, the stools are not healthy looking, and probably less frequent than at first, though still too frequent. For such cases the following should be prescribed, which is both tonic and astringent: Liq. ferri nitratis, gtt. xxvij; tinc. colombæ, ʒiij; syr. simplic. ʒiij. Misce. Give a teaspoonful every two or three hours to an infant of one year. The beef wine and iron of the shops, of late extensively employed in New York as a general tonic, also has a good effect, for the iron which it contains is mildly constipating. The dose of it is also one teaspoonful for an infant of one year.

Quinia has not seemed to me to act well in diarrhœal affections of infancy, apparently increasing the number of stools. It should never be used in acute cases. If ever admissible, it is in the chronic and wasted cases as a tonic, and not for its anti-pyretic effect.

The tincture of digitalis as a heart tonic, in cases of impending

or established spurious hydrocephalus or hypostatic pneumonia, is a good adjuvant. It should be given in one-drop doses every third hour, while more active stimulation by the carbonate or aromatic spirits of ammonia is employed. Digitalis will also probably be found useful in any case attended by weak and rapid pulse, even when there are no symptoms of the complications alluded to.

I have said nothing in reference to the use of pepsin and lactopeptine, for I have never been able to satisfy myself to what extent, or whether they materially assisted the digestive function in this disease. Experiments show that the quantity of food which either one in ordinary medicinal quantity digests is very small.

A NEW REMEDY FOR HYDROPHOBIA.—M. Lesserteur. *Journ. de Méd.*, May 1880.—The author makes known a plant which enjoys a great reputation for the cure of hydrophobia in the kingdom of Annam. This plant, called hoang-nan, is a species of convolvulous, which is closely related to false angustura; its effects should be analogous to those of strychnia and brucine. M. Bouley, in speaking of this new remedy in the *Recueil de Méd. Vétérinaire*, regrets that no case has been cited demonstrative of its efficacy; but thinks that experiments should be made upon the rabbit, which readily contracts hydrophobia by inoculation. M. Bouley relates an anecdote apropos of garlic, a substance which enjoys a great reputation among anti-hydrophobic remedies, and which is an ingredient of a good many formulæ long kept secret. A young man had been bitten by a mad dog and symptoms of hydrophobia soon manifested themselves. The affrighted family, not knowing what to do with the unfortunate, shut him up in a small chamber in which garlic had been placed to dry. In his fury the unfortunate man threw himself upon the bundles of garlic, ate of them abundantly, and soon became drowsy and fell into a profound sleep. On awakening he was cured; the symptoms of hydrophobia had entirely disappeared.

Summary.

Collaborators:

DR. L. W. CASE, DR. R. TILLEY.

THERAPEUTICS.

THE SILK OF THE CORNSTALK IN THE TREATMENT OF AFFECTIONS OF THE BLADDER.—By Dr. Dassum.—(*L'Union Médicale*, April 5, 1880.)

Since the first article published by this journal (*L'Union Médicale*) numerous observations have been published, which clearly show the value of this article in some of the affections of the bladder. We extract the following from the published reports:

Report of Dr. Dezotteux.—Retention of urine by a man of 70 years. The catheter was used the first evening and the following: the sryup of the stigma of mais, given in table-spoonful doses every four hours, and the next morning the urine passed normally. The syrup was continued for some days, and cure was complete.

Ibid. Cystitis, dysuria. Urine ammonical in a man of 68 years. Three doses of the syrup produced a marked improvement, and eight days effected complete relief.

Report of Dr. Lamy. Retention of urine dating ten years in a man of 78, who was accustomed to catheterise himself. One evening, after a full supper, he could not pass the sound, and finding himself bleeding considerably, Dr. Lamy was called, who succeeded, after great difficulty, in withdrawing the urine. For fifteen days the urine was withdrawn by means of the catheter. It

had a strong ammoniacal odor, and exhibited morbid deposits. The bladder was washed with carbolized solutions every day. Alkaline drinks were administered and inunctions of belladonna and gelsemium practiced, but all without result. The infusion* of the cornstalk was then administered. From the second day the urine was passed normally and the infusion having been continued for a few days, the retention of ten years disappeared.

Ibid. Retention of urine for twenty years, in a man of 83 who had used the catheter daily. In using the catheter, violent tenesmus occurred and blood followed. Dr. L. administered the infusion of stigma of mais, and after the third dose the tenesmus ceased. During the night the urine was passed, quite colored with blood. The next day the blood had disappeared, and permanent relief followed.

Report of Dr. André. A man, 42 years, has suffered ten years from chronic cystitis, a sequel of gleet. During this time he has complained of pains in the lower part of the abdomen, a burning sensation when passing water, and a bearing down sensation in the rectum and perineum. The urine deposited mucus and uric acid. During the last three years there has existed a constant and imperative desire to urinate. The urine soon became ammoniacal, and finally it passed involuntarily. The classic treatment employed during the ten years was without result. The syrup in question was administered; no other medication. Eight days after, he went to the doctor's office completely relieved.

Dr. Dassum adds that the best mode of administering it, is in the form of syrup made from the extract; three tablespoonsful during the day in water. The syrup represents 27 grams of the extract to the liter.

The value of the silk seems to differ according to the way in which it has been collected or dried.

NOTE.—The French journals have published a good deal of late about the value of the corn silk, but no definite investigation seems to have been made of the active principle.

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* Fifteen grammes in 500 c. c. of water during the day.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Aug. 2 and 16.
West Chicago Medical Society—Mondays, Aug. 9 and 23.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.
Mercy Hospital—2 p. m., Surgical, by Prof. Andrews.
Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.
Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Quine.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof Jones.
Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, by Prof. Jenks.
Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.
Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.